

NORTHEAST KANSAS REGIONAL TRAUMA SYSTEM PLAN



Northeast Kansas Regional Trauma Council

**Prepared by NEKRTC Executive Committee
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NORTHEAST KANSAS REGIONAL TRAUMA SYSTEM PLAN
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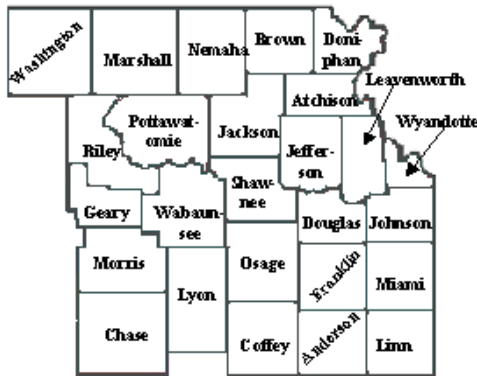
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Northeast Kansas Regional Trauma System Plan

Introduction



Northeast Trauma Region

The 26 counties of the Northeast (NE) Region cover 15,892 square miles with a total population of 1,299,832.

For a complete listing of counties in the Northeast Trauma Region, see Appendix A.

Population/Sq. Miles – U.S. Census Bureau, 2000 Census

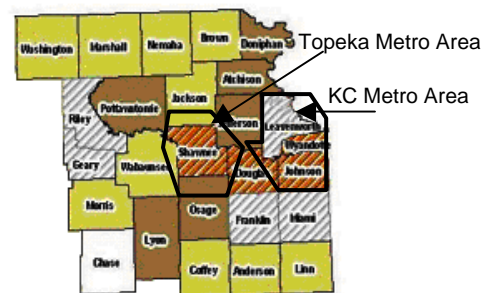
Hospital – Kansas Hospital Association, 2004 Annual Stat Report

Over half of the Kansas population resides in the 26 counties of the NE Region, four are designated as urban, five are designated as semi-urban, six are designated as densely settled rural, ten are designated as rural and one is considered a frontier county (Kansas Department of Health and Environment population density groupings based on the 2000 Census). Three of the 26 counties have a population over 100,000, another three with populations of 50,000 to 100,000, four counties with 20,000-50,000, 15 with 5,000-20,000, and one with a population less than 5000. There are two metropolitan areas located in the region, the Kansas City Metropolitan Area, (encompassing Wyandotte, Leavenworth, Johnson and NE Douglas Counties), and the Topeka Metropolitan Area (encompassing Southern Jackson, Southwest Jefferson, Northwest Douglas, Northern Osage and Northeastern Wabaunsee Counties.) Uninsured, low-income residents in eleven of the 26 counties have inadequate access to primary care according to the Department of Health and Human Services (DHHS), Health Resources Services Administration (HRSA) system of classification for Health Professional Shortage Areas (HPSAs) Primary Care Health Professional Underserved Areas Report, Kansas 2004. The cities of Kansas City (Wyandotte County) and Topeka (Shawnee County) also have low-income population HPSA classifications.

Northeast Region by Population Density

Half of the Kansas population resides in the NE Region, four counties are classified as urban, five are classified as semi-urban, six are classified as densely settled rural, ten are classified as rural and one is considered frontier.

Source: Kansas Department of Health and Environment: Office of Rural Health Primary Care Health Professional Underserved Areas Report, Kansas 2004.



Population Density		Rural / Urban Peer Group	
White	Fewer than 6.0 persons per square mile	Frontier	
Light Yellow	6.0 - 19.9 persons per square mile	Rural	
Orange	20.0 - 49.9 persons per square mile	Densely-Settled Rural	
Dark Orange	50.0 - 149.9 persons per square mile	Semi-Urban	
Dark Brown	150.0 persons or greater per square mile	Urban	

Background

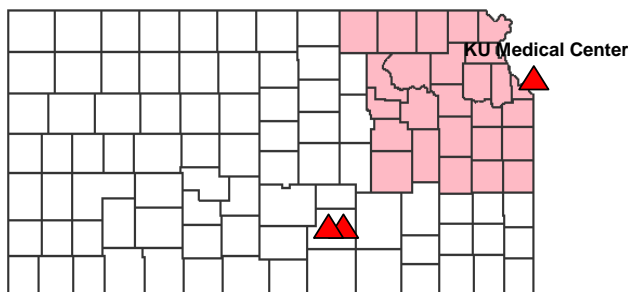
The Northeast Kansas Regional Trauma Council (NEKRTC) is composed of over 200 individuals representing more than 100 organizations. A list of member organizations is located in Appendix B. The general membership meets on a bi-annual basis. The executive committee meets face-to-face quarterly, with at least one conference call between meetings. Three subcommittees: pre-hospital/communications (including EMD and EMD Continuous Quality Improvement (CQI)), acute care/rehabilitation, and prevention/education meet on an ongoing basis.

Northeast Kansas Regional Trauma System Plan

The NEKRTC started work on the regional trauma plan in May 2004. The NEKRTC subcommittees are primarily responsible for developing and monitoring the regional trauma plan. The executive committee provides plan oversight.

Kansas has three voluntary American College of Surgeons (ACS) verified Level I Trauma Centers including the University of Kansas Hospital (Kansas City, Wyandotte County), Via Christi (Wichita, Sedgwick County) and Wesley (Wichita, Sedgwick County). The University of Kansas Hospital is located in the Northeast Kansas Trauma Region. The NE Region borders SE Nebraska and NW Missouri with patients in counties sharing borders with those states frequently transported to hospitals in those states. Although regional data is needed to determine trauma patient destination, many critically ill trauma patients are transported to the Kansas City area while outlying areas might transfer to trauma centers in South Central Kansas and neighboring states.

Although densely populated in some areas, the region has an expansive rural population to consider in terms of resource utilization. In addition, many critically ill patients are transferred into the NE region from other trauma regions to take advantage of high level trauma patient care resources.



ACS Verified Level I Trauma Centers

There are three voluntary ACS verified Level I Trauma Centers in Kansas. One is located in the NE Trauma Region, University of Kansas Hospital.

Source: American College of Surgeons Trauma Programs: Verified Trauma Centers.
<<http://www.facs.org/trauma/verified.html>>

Resources

In addition to population diversity, the NE Region is unique in diversity of facilities and resources. There are 3,297 MDs and 214 DOs in the NE Region. While the NE Region boasts a large number of physicians, over 80% are located in Wyandotte, Shawnee and Johnson counties. Ten counties have less than five MDs and three counties have just one MD each. In the three counties with one MD, Wabaunsee has four ARNPs, Chase has a physician assistant (PA) and an ARNP and Jefferson has two DOs, four PAs and ten ARNPs. (Healthcare Data Governing Board, Healthcare Professional Inventory, November 2003).

The region has 34 hospitals within the 26 counties. In response to the 2003 NEKRTC Resources survey, thirteen facilities indicated they would pursue trauma center classification. Of the thirteen facilities, six indicated they would pursue Level III status; three responded Level II, three responded Level IV and one responded Level I. As the NEKRTC executive committee is notified of hospitals seeking trauma facility status, the hospitals will be reviewed by the executive committee and added to the plan as appropriate.

ACS Verified Trauma Centers: The region's only ACS verified Level I Trauma Center is the University of Kansas Hospital (Kansas City, Wyandotte County).

Hospitals with Dedicated Trauma Services: Overland Park Regional Medical Center (Overland Park, Johnson County) is recognized by their local authority as a trauma center, and is in the process of ACS Level II verification. Stormont-Vail Healthcare (Topeka, Shawnee County) also has trauma services.

Northeast Kansas Regional Trauma System Plan

A. System Access

Emergency dispatchers are usually the beginning of emergency medical response and trauma system activation in NE Kansas. Emergency dispatchers provide First Responders and Emergency Medical Services (EMS) with essential information regarding the location and nature of emergency calls. Effective communication among emergency responders is vital to patient care.

A(a) 9-1-1 or single access telephone number availability

In the NE Trauma Region, telephone and 9-1-1 are the most frequent methods used by the public to access the emergency medical system and report emergency situations. All counties in the NE Region have access to 9-1-1.

Enhanced 9-1-1

In 1996, the Federal Communications Commission (FCC) issued a Report and Order requiring all wireless carriers and cell phone manufacturers to provide the capability for automatically identifying to emergency dispatchers the location from which a wireless call is being made. Wireless carriers are required to deliver to the emergency dispatcher the telephone number of a wireless handset originating a 9-1-1 call, as well as the location of the cell site or base station receiving the 9-1-1 calls, which provides a rough indication of the caller's location. (<http://ftp.fcc.gov/Bureaus/Wireless/Orders/2000/da002336.html>)

Regular 9-1-1 service usually reaches local or county agencies, but the Kansas Highway Patrol (KHP) advertises three numbers: 9-1-1, *HP (to reach the KHP directly) and *KTA (to reach the KHP for turnpike-related matters). Although 9-1-1 has been designated as the "official" number for reporting emergencies, it is by no means universal, either for wired or wireless phones. There are also many locations where 9-1-1 does not work for a wireless phone user because the wireless carrier has not enabled 9-1-1 in its routing equipment.

When dialing 9-1-1 from a wireless phone, callers might be routed to a local law enforcement agency, a county sheriff or to the state-level law enforcement agency.

In the NE Region, 36 of 44 (82%) dispatch agencies completed the 2003 Kansas Public Safety Communications Survey. There are 44 agencies in the NE Region that dispatch emergency services including state, municipal and county law enforcement, and fire departments, although not all agencies dispatch EMS. Annually, the NE Region receives over 893,000 emergency calls. With the increased use of cellular telephones, dispatch centers are receiving heavier call volumes from these users. Because Enhanced 9-1-1 (E 9-1-1) is not a standard in Kansas, the dispatch centers do not automatically receive the same level of information and dispatchers may not be able to collect information that would normally be visible through 9-1-1 service. This can dramatically increase response time and may negatively impact patient outcomes. Evidence suggests that improved public access to 9-1-1 systems can improve outcomes for trauma patients. The Kansas Public Safety Communications Committee has been established and addresses related issues.

**2003 Kansas Public Safety Communications Survey
Dispatch, 9-1-1, E 9-1-1, Wireless and GPS**

	Numerator	Denominator	%
Total # Agencies		44	
Surveys Returned	36	44	82
Dispatch Service Provided	31	36	86
E 9-1-1 Dispatch Capabilities – Yes	22	27	81
Receive Wireless Emergency Calls - Yes	29	31	94
GPS Capability - Yes	6	36	17

Northeast Kansas Regional Trauma System Plan

Needs Analysis

- The NEKRTC identified the need for dispatch agencies to expand systems to accept E 9-1-1 calls from phone companies and ensure phone companies deliver the calls once the dispatch agencies are able to receive calls. There is a need for regional Global Positioning System (GPS) capability.

Objectives

- Monitor E 9-1-1 use and implementation in the region.
- Support statewide and local efforts in the development and implementation of E 9-1-1.
- Support GPS increased capabilities including cellular Voice over Internet Protocol (IP). Voice over IP is a method for taking analog audio signals and turning them into digital data that can be transmitted over the internet. Private Branch Exchange (PBX) is a private telephone network used within businesses to reduce the need for connecting an external line to every telephone in a business.

Activities In Progress

- Other than State and Federal ongoing requirements, no regional activities are in progress.

Planned Activities

- The statewide plan for E 9-1-1 will be supported.
- E 9-1-1 implementation will be monitored in the region related to trauma care issues and support will be provided to local organizations.
- The NEKRTC will support increased capabilities including cellular, Voice over IP, and PBX.

A(b) Backup or emergency systems

The region has 44 dispatch/communications centers, mostly run by law enforcement, and they are required to have back-up or emergency systems. Weapons of Mass Destruction and emergency preparedness planning committees address issues regarding communications center's back up and emergency systems.

Needs Analysis

- The NEKRTC does not have regional information regarding communications center back-up and emergency systems.

Objectives

- Monitor and support development and use of back up plans.
- Collect data on back-up system procedures for NE Region dispatch/communications centers and encourage back-up system development programs.
- Develop a map or grid of system back-up plans.

Activities in Progress

- None at this time.

Planned Activities

- The EMD subcommittee will obtain back-up plans for communications centers.
- A map will be developed to document back-up plans in use.
- Development and implementation of back up-plans will be encouraged.

Long-Term Goals

- All communications centers will have back up-plans in place.

Northeast Kansas Regional Trauma System Plan

A(c) First responder availability

The Kansas Board of Emergency Medical Services (KBEMS) certifies First Responders after completion of an approved First Responder training program. Agencies in Kansas, including law enforcement and fire agencies, utilize non-certified first responder personnel. In the NE Region, comprehensive data is not available regarding the number of non-certified first responders, their work setting, requirements and roles and responsibilities. Certified First Responders, Emergency Medical Technicians (EMT), and Mobile Intensive Care Technicians (MICT) information is available from KBEMS. The NEKRTC recognizes the vital role first responders play in triage and trauma alert. First responders are often first to arrive on scene, view the patient, and perform an initial patient assessment. They further impact the system with respect to triage and trauma alert because they have the ability to influence mode of transportation decisions.

Needs Analysis

- Comprehensive data is not available regarding the work settings, requirements, roles and responsibilities of non-certified first responders.
- Issues exist with on scene communication between first responders and EMS regarding patient care.

Objectives

- Determine the number of fire departments and law enforcement agencies that require medical training.
- Obtain data on non-certified first responder training requirements, employment location and responsibilities.
- Support efforts to identify needs regarding on scene communication.

Activities in Progress

- KBEMS monitors the activities of certified EMS personnel, but not the activities of non-certified first responders.

Planned Activities

- Develop a list of agencies with non-certified first responders including the number of first responders within agencies.
- Develop a list of agencies requiring medical training and level of medical training for first responders, to include quality outcomes.

Long-Term Goals

- First responders should have basic emergency medical training.

Evaluation Plans and Results for Activities

- A list of agencies with first responders and medical training level will be developed.
- Emergency medical training for first responders should be required.

A(d) Public education regarding resources and accessing help

The public most commonly accesses the system through telephone and 9-1-1. In the NE Region, public education regarding emergency system access is determined by individual agencies and organizations and/or local component medical societies. With increased use of cellular technology accessing the emergency medical system through cellular technology has increased. (Refer to Section A(a)).

Needs Analysis

- There is a need to educate the public regarding the proper use and advantages of E 9-1-1.

Activities in Progress

- Local organizations implement public education at their discretion.

Northeast Kansas Regional Trauma System Plan

Planned Activities

- Support the community-based approach to public education.
- Support and encourage public education regarding the proper use and advantages of E 9-1-1.

Northeast Kansas Regional Trauma System Plan

B. Communications

Pre-hospital care in the NE Kansas Trauma System Plan includes prevention, EMS, First Responders, dispatch and communications centers. Pre-hospital care is a vital component of trauma systems; what happens in this setting often directly impacts both the initial treatment and eventual outcome. The pre-hospital components of a trauma care system should provide easy access, prompt response by qualified professionals responsible for assessment, stabilization, triage and transport to the most appropriate facility.

B(a) Communications/dispatch centers and level of resources

There are 44 dispatch and communications centers in the NE Region. Using data from the 2003 Statewide Communications Survey and the 2004 NEKRTC EMD training survey, a description of the current system follows.

B(b) Communications constraints

Equipment

Radio is the primary method of communication for pre-hospital care providers in the NE Region. The brand and age of radio equipment used varies, which effects technology upgrades and interoperability. Based on the 35 agencies reporting the age of their communications systems in the 2003 Statewide Communications Survey, approximately 43% of communications systems are 11 years or older. For many emergency services agencies in the region, technology upgrade costs to use an 800 MHz tower would be prohibitive.

Cellular telephones are a popular tool for EMS to hospital communication; however, they are not always reliable due to remote locations, terrain and service coverage.

Manufacturer	System Age (in years)					Dispatch Systems Type & Age
	0 - 5	6 - 10	11 - 15	16 - 20	More than 20	
Motorola	5	5	7	2	4	43% of dispatch systems used in the NE Region are 11 years or older with 4 agencies reporting equipment age as 20 years or older.
EF Johnson	0	0	0	0	0	
M/A - COM	0	1	1	0	0	
Ericsson	1	1	0	0	0	Source: 2003 Kansas Public Safety Communications Survey
Other	7	0	1	0	0	
						35 of 36 responded to this question

Distance

The 2003 Statewide Communications Survey revealed a majority of the responding agencies, over 80%, respond to calls covering 1,000 square miles or less. Over 90% of agencies (30/31 responding to the question) reported providing 24-hour dispatch services.

Square Miles Covered	# Agencies	% Agencies	Dispatch Agencies and Square Miles Covered
Less than 500	11	36.7%	
501-1,000	15	50.0%	Over 80% of the NE Region dispatch and communications centers respond to calls covering 1,000 square miles or less.
1,001-5,000	2	6.7%	
5,001-10,000	0	0.0%	Source: 2003 Kansas Public Safety Communications Survey
10,001 or more	2	6.7%	
			31 of 36 responded to this question

Northeast Kansas Regional Trauma System Plan

Population

Of the 26 counties within the NE Region, 6 (23%) have a population of 50,000 or more. The remainder of the region is rural, including two counties with a population of less than 2,500. According to the Kansas Department of Health and Environment (KDHE), Chase County has less than six persons per square mile making it "frontier" under the Health Resources Services Administration (HRSA) classification system.

<u>Population Served</u>	<u># Agencies</u>	<u>% Agencies</u>	<u>Dispatch Agencies and Population Served</u>
Less than 2, 500	2	6.5%	Almost 50% of the NE Region dispatch and communications centers serve populations of 100,001 or more
2,500-5,000	7	22.6%	
5,001-10,000	5	16.1%	
10,001-100,000	2	6.5%	<i>Source: 2003 Kansas Public Safety Communications Survey</i>
100,001 or more	15	48.4%	
			31 of 36 responded to this question

Terrain

Due to the rural nature of the state, cellular telephone coverage is not 100% statewide. Not only do large gaps of cellular service exist in geographically isolated areas, gaps exist along the heavily populated Interstate transportation system.

Cellular Telephones

Cellular telephones present another method for accessing the emergency medical system. The Wireless Enhanced 9-1-1 Act was passed during the 2003 Kansas legislative session. The legislation is designed to allow 9-1-1 centers to track where a citizen is calling from on their wireless telephone and it created a funding mechanism to expand wireless 9-1-1 services throughout the state.

Inter-Agency Communication

According to the 2003 Statewide Communications Survey, 39% of the agencies reported law enforcement, EMS, and fire departments were unable to communicate on one radio channel or talk group. Nine agencies reported an operational concern with radio communications between agencies in the region, as well as those in a bordering state. In centers that combine police, fire, and EMS calls, EMS calls may need to wait until the police call has been completed. In cases where both police and EMS are needed to respond, priority for police calls can lead to delays in pre-arrival instruction to callers.

Needs Analysis

- The NEKRTC identified equipment interoperability and communication between providers as an issue effecting trauma patient care. The inability to communicate effects the amount of time required to respond to the scene increasing the amount of time between the initial call from dispatch to initial patient assessment, triage, stabilization and transport to the most appropriate facility.

Objectives

- Support the development, implementation, and funding of a statewide communications system.
- Support and monitor the state interoperability plan as it relates to trauma care.
- Invite the NE Kansas Regional Bioterrorism representative to executive committee and other RTC meetings.

Activities in Progress

- None at this time.

Northeast Kansas Regional Trauma System Plan

Planned Activities

- Support implementation of a statewide communications system as it relates to trauma care.
- The NE Kansas Regional Bioterrorism representative will be invited to attend executive committee and other RTC meetings.
- Support the development of data communication systems, i.e. EMSsystem® and Web EOC®.

B(c) Contact information for each center including radio frequencies

Refer to Appendix C.

B(d) Training for area communications personnel

In June 2004, the NEKRTC conducted a survey of the 44 dispatch/communications agencies in the region to determine training needs, 43 dispatch/communications centers responded. Overall, the survey revealed several different emergency medical dispatch (EMD) training programs are in use and some agencies do not use an EMD training program at all. Twenty-seven agencies dispatch EMS and sixteen agencies use an EMD training program to train dispatchers. Eleven agencies do not use an EMD training program and fifteen agencies transfer EMS calls to another agency. Of the dispatch/communications centers reporting use of a nationally certified EMD training program, the majority of centers (10) employed Medical Priorities Dispatch of the National Academies of Emergency Dispatch (NAED). Two counties receive dispatch services from a neighboring state.

Both the 2003 Kansas Public Safety Communications Survey and the 2004 NEKRTC EMD Training Survey identified that many agencies cite liability concerns as a primary reason they do not pursue EMD training. In addition, overall costs of training; including staff time out of office and travel, prohibitive course expenses and high volumes of dispatcher attrition were reasons EMD training is not pursued. Most dispatch services are provided by law enforcement, where higher volumes of law enforcement related calls as compared to EMS related calls make EMD training a low priority.

Needs Analysis

- EMD training is considered cost prohibitive. Travel to EMD trainings and overnight stays are usually required as there is only one EMD training officer in the state. EMD training needs to be more accessible.

Objectives

- Train one Medical Priorities instructor for the NE Trauma Region.
- Train ten Medical Priorities dispatchers within the nine agencies that indicated there was not an EMD model in place and purchase fifteen Medical Priorities Card Sets for participating agencies.
- Implement and follow the Medical Priorities EMD Continuous Quality Improvement (CQI) model.

Activities in Progress

- The pre-hospital/communications and EMD subcommittees have developed and are in the process of implementing a plan for EMD education in the region.
- Ten dispatch/communications centers indicated they were interested in receiving EMD training and training for those centers is under evaluation.
- A Medical Priorities instructor candidate has been selected and training is ongoing.
- The EMD and EMD CQI subcommittees meet on a regular basis.

Northeast Kansas Regional Trauma System Plan

Planned Activities

- A Medical Priorities instructor has been trained and is required to teach a minimum of two Medical Priorities courses annually for two years.
- Medical Priorities card sets will be purchased for ten stations.

Long-Term Goals

- Region wide standardization of the emergency medical dispatch system will be implemented.
- One regional communications center will dispatch emergency personnel.
- Educate dispatch/communications centers as to the importance of EMD.
- Region wide EMD Training will be provided to interested agencies.

Evaluation Plans and Results for Activities

- The EMD plan goals will be completed by December 2007.

B(e) Response & Scene Times

Response and scene time protocols are the responsibility of each service or organization in the NE Region. It is unknown the agencies that have set standards for response and scene times. Protocols are the responsibility of each service or organization in the NE Region. The Medical Priorities CQI guidelines recommended by the NEKRTC requires call information from communications and dispatch centers be conveyed to units within two minutes of call receipt.

Needs Analysis

- Regional response and scene times need to be collected and evaluated. A standardized mechanism for collecting regional data on response and scene times has not been developed or implemented. A regional standard has not been established regarding response and scene times. Collected data needs to be reported to a central collection point to be determined.

Objectives

- Encourage the Kansas Trauma Registry Subcommittee to include response and scene times as a required data element for future monitoring and measurement activities.
- Dispatch centers will convey trauma patient information to units within 2 minutes of call receipt.
- Trauma system patients will receive pre-hospital emergency care within the following defined parameters 75% of the time (unless there are extenuating circumstances).
 - Response Times
 - Urban – 10 minutes or less
 - Suburban – 12 minutes or less
 - Rural – 30 minutes or less
 - Interfacility transfer of patients is completed in a timely fashion - 6 hours
 - Time to definitive care from first facility – 6 hours
 - (Committee on Trauma (1993). *Resources for optimal care of the injured patient: 1993*. Chicago: American College of Surgeons.) The NEKRTC EMD subcommittee will develop a reporting structure from the dispatch/communications center to the NEKRTC regarding the time between call received to actual unit dispatch time.
 - Scene Times
 - Class I Patients (For definition of Class I Patients refer to the Adult Field Triage Decision Scheme-Appendix D) - 10 minutes without extenuating circumstances (Pre-Hospital Trauma Life Support Training Manual, 5th Edition, Chapter 15, page 371.)

Northeast Kansas Regional Trauma System Plan

Activities in Progress

- NEKRTC EMD project (Medical Priorities).
- MERGe
- Medical Priorities instructor and training site development.

Planned Activities

- The executive committee will approach the Kansas Trauma Registry Subcommittee about collecting data to determine response and scene times. If approved, monitor and evaluate Kansas Trauma Registry response and scene time data.
- EMD centers will be informed of the Medical Priorities response time goal.
- Support development of mutual aid agreements for interfacility transfers.

Long-Term Goals

- The Kansas Trauma Registry will collect response and scene times.
- Implementation of Performance Improvement (PI) review.
- Kansas Trauma Registry will provide data to the region for analysis and trending.

Evaluation Plans and Results for Activities

- The NEKRTC will have the ability to monitor and evaluate response and scene times on a regional scale.
- Benchmarks for response and scene times will be established.
- After development, the region will follow standards for response and scene times.

B(f) Communications for multi-agency scenes

The Kansas City Metropolitan area has the Mid-America Regional Council Emergency Rescue Committee (MARCER) that promotes regional coordination and cooperation in emergency pre-hospital care for the metropolitan area. MARCER is composed of professionals in the EMS community. Members include state-licensed emergency ambulance services and other EMS providers, as well as representatives from area hospitals, emergency room nurse managers, the Heart of America Metro Fire Chiefs Council and Kansas and Missouri Hospital Associations.

Through MARCER, members come together to:

- Find solutions to common problems to ensure the highest quality of pre-hospital care throughout metropolitan Kansas City.
- Influence decisions impacting the EMS profession.
- Track and influence state legislation.
- Maximize local and regional pre-hospital EMS resources through such means as cooperative purchasing.
- Coordinate communications between EMS personnel and hospitals through the Kansas City area Med Channel system and an internet-based EMSsystem®.
- Research “technology options” for improvements to pre-hospital care.
- Ensure that local agencies are prepared to respond to multi-casualty incidents and those involving weapons of mass destruction.

In addition, the Major Emergency Response Group (MERGe) is a system of preparation, response, and recovery for major emergency medical events affecting licensed ambulance services within Kansas EMS Regions III and VI. The group is comprised of EMS leaders who know the importance of an organized response system in times of need and they provide experience, leadership and expertise. MERGe provides incident command staff including planning, operations, finance and logistics and the group coordinates resources. MERGe is activated for disasters, mass casualty incidents, overwhelmed EMS systems, and other major events. Although, the NE Trauma Region does not have a regional system such as MERGe the NEKRTC supports the MERGe concept. For additional background information, refer to communications constraints B(b).

Northeast Kansas Regional Trauma System Plan

Needs Analysis

- For needs analysis, refer to communications constraints B(b).

Objectives

- Support and monitor the state interoperability plan for issues effecting trauma patient care.
- Support interoperability in the Kansas City Metro area.
- Support the MERGe concept in the region.

Activities in Progress

- Support implementation of a statewide communications system.

Planned Activities

- Support MERGe activities.
- Monitor MARCER.

Northeast Kansas Regional Trauma System Plan

C. Field Triage Guidelines

Trauma triage protocols are the responsibility of each organization in the region and are developed in conjunction with the local medical adviser within each county. The NEKRTC has access to very few local protocols despite efforts to obtain protocols currently in use throughout the region. EMSys[®] was implemented in the NE Region in 2004. EMSys[®] is a web-based system that provides current information regarding hospital diversion and resource status.

Regional data from the Kansas Trauma Registry will be used when available to determine current patient flow patterns.

C(a) Field Triage Guidelines

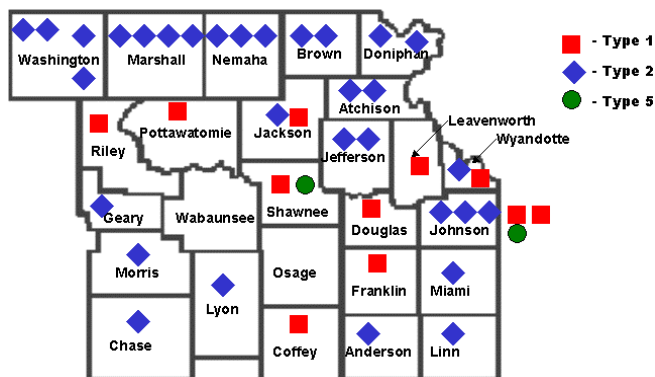
The NEKRTC developed triage guidelines based on the ACS Committee on Trauma criteria. (Refer to Appendix D)

- (a1) **Classification of patients by severity (physiological, mechanism, co-morbid factors etc.)**
See the NEKRTC Field Triage Protocol in Appendix D.
- (a2) **Acknowledgment of level of pre-hospital care provider available (including air medical transport)**
- (a3) **Trauma team notification/activation**
See the NEKRTC Field Triage Protocol in Appendix D.

KBEMS certifies ambulance services in Kansas and provides licensing for three types of services:

- Type I - provides Advanced Life Support (ALS).
- Type II - provides Basic Life Support (BLS), and
- Type V - provides critical care transport (including rotor and fixed wing)

In the NE Region, there are 44 EMS services, Type I has 11 certified, Type II has 31 certified and Type V has two certified services.



EMS Service Location & Type

There are 44 EMS services in the NE Region. This map shows the licensure type by county (identifiers do not indicate exact location of the service within the county).

Source: Kansas Board of Emergency Medical Services, November 2004

Six levels of certification are available for pre-hospital personnel in Kansas, including:

- First Responder (FR)

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- Emergency Medical Technician (EMT)
- Emergency Medical Technician-Intermediate (EMT-I)
- Emergency Medical Technician-Defibrillator (EMT-D)
- Emergency Medical Technician I-D (EMT I-D –holds both the Intermediate and Defibrillator levels)
- Mobile Intensive Care Technician (MICT-Paramedic)

NE Region EMS Personnel by Certification Type

	<u>FR</u>	<u>EMT</u>	<u>EMT-I</u>	<u>EMT-D</u>	<u>EMT I-D</u>	<u>MICT</u>	<u>Total</u>
Total	534	2326	381	45	203	648	4137

Source: Kansas Board of Emergency Medical Services, March 2005

Five air ambulance companies provide services to the NE Region with aircraft located in Lawrence, Junction City, Emporia, Salina, Overland Park and Kansas City. The services are licensed and regulated by KBEMS. Trauma protocols are the responsibility of each air ambulance service.

Needs Analysis

- The NEKRTC has limited information regarding the current trauma triage protocols in use throughout the region. Standardized triage and trauma alert guidelines have not been implemented in the region and the need exists for all providers of trauma care to communicate the same language regarding trauma patients. Regional data from the Kansas Trauma Registry is needed to determine current patient flow patterns.

Objectives

- Encourage all pre-hospital agencies and hospitals to use the NEKRTC field triage guidelines which are based on the "Committee on Trauma (1999), *Resources for Optimal Care of the Injured Patient: 1999*, American College of Surgeons, Chicago".
- Monitor implementation of the NEKRTC field triage guidelines.
- Continuously evaluate and adjust the NEKRTC field triage guidelines based on feedback from pre-hospital agencies and hospitals.
- The NEKRTC will request valid and accurate Kansas Trauma Registry data to establish a regional baseline for patient flow.
- Classification of hospitals providing trauma care will be implemented.

Activities in Progress

- The NEKRTC has developed a model field triage protocol for recommendation to pre-hospital care agencies and hospitals throughout the region.

Planned Activities

- Education regarding use of the NEKRTC field triage guidelines will be provided to pre-hospital agencies and hospitals.
- The NEKRTC will support and encourage classification of all hospitals throughout the region according to state guidelines.

Short-Term Goals

- Support implementation of a trauma facility classification system.

Long-Term Goals

- All pre-hospital agencies and hospitals will implement the NEKRTC field triage guidelines for trauma patients.
- All hospitals will be classified according to state guidelines.

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Evaluation Plans and Results for Activities

- Kansas Trauma Registry data will be used to determine current patient flow throughout the region.
- Increased use of the NEKRTC field triage guidelines.

C(b) Diversion Policies

Diversion policies are the responsibility of local organizations. Currently, the NEKRTC does not have sufficient regional data to provide evaluation, statements, plans or recommendations regarding diversion policy issues.

Needs Analysis

- Regional data on diversion is needed to accurately evaluate the current system.

Objectives

- All hospitals in the NE Trauma Region will participate in EMSys[®].
- EMSys[®] will be used to establish a regional baseline to evaluate diversion.
- The NEKRTC will support the Kansas Trauma Program trauma facility classification system.

Activities in Progress

- To be determined.

Planned Activities

- The NEKRTC will mail a letter to all hospital CEOs in the region to encourage participation in EMSys[®].
- The NEKRTC will request EMSys[®] reports from the Kansas Hospital Association (KHA) to determine diversion episodes.
- The NEKRTC will work with hospitals to review the Advisory Committee on Trauma's (ACT) proposed trauma facility classification criteria and obtain regional feedback regarding the trauma facility classification process.

Long-Term Goals

- The region will develop and adopt a coordinated approach for diversion.
- The region will implement a coordinated approach for diversion.
- The region will determine hospital trauma care resources.

C(c) Resource Utilization Protocols

Resource utilization protocols have not been addressed by the NEKRTC. Presently, the Kansas Trauma Program does not have a plan implemented for classification of trauma centers. The ACS Committee on Trauma currently verifies trauma centers based on the depth of resources available for care of the critically injured patient.

In the NE Region, patients are transported and transferred to hospitals according to local protocol. Written transfer agreements occur at the discretion of individual facilities and the NE Region does not have copies of most transfer agreements used by facilities. The University of Kansas Hospital and Stormont-Vail Healthcare have transfer agreements. Bypass of local facilities has not been addressed by the NEKRTC; however, the NEKRTC field triage guidelines provide an initial foundation. Issues affecting the ability of the NEKRTC to address bypass issues include the lack of accurate and timely regional data. Kansas Trauma Registry data will be necessary to provide regional baseline information regarding bypass issues allowing the NEKRTC to base system improvements on accurate data. Also affecting the ability of the NEKRTC to address bypass issues is the lack of policy for trauma facility classification. The Kansas Trauma Program does not have a process in place to classify trauma facilities in order to determine patient destination. The NEKRTC distributed "Committee on Trauma (1999), *Resources for Optimal Care of the Injured Patient: 1999*,

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American College of Surgeons, Chicago” to general members to build awareness of trauma facility criteria.

(c)1 Acknowledgement of regional resources (EMS and hospital) and geographic make-up and why bypass of local facilities may be appropriate.

There are 34 hospitals totaling 3,200-staffed beds located in the NE Region. Five of the 26 counties do not have a hospital. The NEKRTC conducted the 2003 Trauma Patient Capabilities Assessment that was completed by over 70% of hospitals. Eight facilities, including an ACS verified Level I trauma center, are located in the Kansas City area.

(c)2 Instances when nearest facility should not be bypassed

The NEKRTC recommends that facilities not be bypassed when the following complications exist:

- Patient(s) with Airway Compromise
- Patient(s) in Cardiac Arrest or Impending Arrest
- Severe Weather Conditions
- Consider pediatric patients with suspected severe hemorrhage and no IV line established

Needs Analysis

- Regional data is needed to establish a baseline for instances of facility bypass. Classification of trauma facilities is needed to determine patient destination. The NEKRTC Trauma Capabilities Assessment needs to be analyzed to determine needs and goals.

Objectives

- The NEKRTC will support the Kansas Trauma Registry in providing accurate and timely data.
- The NEKRTC will support the efforts of the Kansas Trauma Program in establishing clear guidelines for classification of trauma facilities.
- Analyze the NEKRTC Trauma Capabilities Assessment data.
- Obtain data from EMSsystem® regarding diversion episodes.

Activities in Progress

- To assist with quality and completeness of Kansas Trauma Registry data, the NEKRTC volunteers support and technical assistance to facilities as needed.

Planned Activities

- The NEKRTC will continue support of the regional trauma registry and trauma facility classification.
- Determine needs and develop goals based on the NEKRTC Trauma Capabilities Assessment data.
- A letter will be mailed to all CEOs in the region in support of EMSsystem® participation.

Long-Term Goals

- More aggressive and specific plans related to bypass issues will be developed as more accurate and timely Kansas Trauma Registry data is provided to the NEKRTC.
- The region will determine hospital trauma care resources.

C(d) Facility Response Criteria

Each facility is responsible for developing facility response protocols. Regional data from the Kansas Trauma Registry will be used to analyze current issues and trends with respect to facility response.

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(d)1 Classification of patients by severity (physiological, mechanism, co-morbid factors, etc.)

The NEKRTC will follow "Committee on Trauma (1999), *Resources for Optimal Care of the Injured Patient: 1999*, American College of Surgeons, Chicago" as a guide for patient classification. Regional data from the Kansas Trauma Registry will be used to analyze current issues and trends with respect to classification of patients.

(d)2 Facility action based upon classification of patients (i.e. Trauma team activation, stabilization/transfer, or admission for observation)

The NEKRTC will follow "Committee on Trauma (1999), *Resources for Optimal Care of the Injured Patient: 1999*, American College of Surgeons, Chicago" as a guide for facility action based upon patient classification. Regional data from the Kansas Trauma Registry will be used to analyze current issues and trends with respect to facility action based upon classification of patients.

Needs Analysis

- Classification of trauma facilities is needed. Regional Kansas Trauma Registry data is needed.

Objectives

- The NEKRTC will continue to support the Kansas Trauma Program with efforts to provide accurate and timely Kansas Trauma Registry data to the NEKRTC and individual facilities.
- The NEKRTC will support Kansas Trauma Program efforts to implement a trauma facility classification system.
- The NEKRTC will follow "Committee on Trauma (1999), *Resources for Optimal Care of the Injured Patient: 1999*, American College of Surgeons, Chicago" as a guide for facility action based upon patient classification.

Activities in Progress

- To assist with quality and completeness of Kansas Trauma Registry data, the NEKRTC volunteers support and technical assistance to facilities as needed.

Planned Activities

- The NEKRTC will continue support of the regional Kansas Trauma Registry and Kansas Trauma Program and progress will be monitored.

Long-Term Goals

- An initial plan will be developed once trends can be established using accurate regional data.

C(e) Inter-Hospital Transfers

In the NE Region inter-hospital transfers and transfer agreements are the responsibility of each facility. Regional data from the Kansas Trauma Registry will be used to establish a baseline of inter-hospital transfer activity.

(e)1 Identification of patients to be transferred

The NEKRTC does not identify patients to be transferred. This is currently the responsibility of each facility and the NEKRTC encourages use of those criteria found in the "Committee on Trauma (1999), *Resources for Optimal Care of the Injured Patient: 1999*, American College of Surgeons, Chicago".

(e)2 Identification of available patient destinations and criteria for selection

The NEKRTC does not identify available patient destinations and criteria for selection. This is currently the responsibility of each facility. EMSsystem® was implemented in hospitals in 2004.

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(e)3 Availability of regional facility “800” numbers and coordination of distributing/routing patients

The region does not have a regional facility “800” number. Please see Appendix E for available individual facility “800” numbers.

(e)4 Available means of transporting patients and capabilities

Refer to the Field Triage Guidelines section under acknowledgement of pre-hospital care provider resources (Section C (a)4).

(e)5 Treatment/stabilization criteria and time guidelines should be outlined

Treatment/stabilization criteria and time guidelines are the responsibility of each facility in the region.

(e)6 Written transfer agreements

In the NE Region inter-hospital transfers and transfer agreements are the responsibility of each facility.

Needs Analysis

- The NEKRTC will use regional data from the Kansas Trauma Registry regarding inter-hospital transfers. A standardized decision scheme for patient destination has not been developed. One regional communications center is needed to coordinate inter-hospital transfers. The NEKRTC needs to determine hospital resources for trauma care.

Objectives

- Establish a baseline of inter-hospital transfer patient flow using the Kansas Trauma Registry.
- Support the efforts of the Kansas Trauma Program to implement a process for classification of Level III and IV facilities.

Activities in Progress

- EMSsystem® implemented and supported.
- NEKRTC Trauma Capabilities Assessment completed.
- The NEKRTC model field triage guidelines have been drafted.
- The Kansas Trauma Program is defining a classification process for Level III and IV facilities.

Planned Activities

- Education using the model field triage protocol will be provided and implementation of the model by individual facilities will be encouraged.
- Education and assistance for hospitals will be provided regarding the Level III and IV classification process. Input and support for the hospital classification process will be provided to the Kansas Trauma Program and the ACT.
- Baseline knowledge of current patient flow will be evaluated and goals will be established.

Long-Term Goals

- Increased use of model field triage protocol by individual facilities.
- Increased participation by hospitals in the hospital classification process.
- Written transfer agreements will be developed.

C(f) Medical Direction of Pre-hospital

Each of the forty-four EMS services in the NE Region has a medical advisor. The medical advisor provides “on-line” medical direction (when EMS personnel have direct communication with a hospital or physician) for patient care and “off-line” medical direction (when EMS personnel do not have direct communication with the hospital or physician). Patient care is directed through the use of written patient care protocols when operating “offline.”

(f)1 Roles/Responsibilities of Medical Advisor

According to KSA 65-6126 each emergency medical service shall have a medical advisor appointed by the operator of the service to review, approve and monitor the activities of the attendants.

(f)2 Medical Advisor Approved Protocols

The local component medical society or the alternative as provided in state law approves all protocols.

Needs Analysis

- Medical advisors should be aware of the NEKRTC and issues related to regional trauma plans.

Objectives

- Encourage medical advisors to participate in the NEKRTC and plan development
- The NEKRTC will propose model protocols to be considered by each EMS service.

Activities in Progress

- Planning and development activities are in progress.

Planned Activities

- A plan will be developed to communicate regional trauma plan information to medical advisors.
- The NEKRTC will develop model protocols.

Long-Term Goals

- All medical advisors will support and participate in the regional trauma council.

D. Health Care Facilities

D(a) Trauma Services

The NEKRTC supports an inclusive trauma system where access to trauma services is available through every facility in the region. It is essential in a regional trauma system encompassing rural areas for each rural facility to have a clearly defined role based on its resources and distances between facilities. These factors will determine where the patient receives both initial and definitive care. Every effort should be made to ensure that when the patient is transferred, it would be the most appropriate facility the first time. See "Committee on Trauma (1999), *Resources for Optimal Care of the Injured Patient: 1999*, American College of Surgeons, Chicago".

A statewide process for classification of trauma facilities has not been implemented at this time.

Needs Analysis

- Regional data from the Kansas Trauma Registry is necessary to evaluate and identify needs related to trauma services. The NEKRTC Trauma Capabilities Assessment should be analyzed for needs and resources related to trauma services.

Objectives

- Obtain accurate and timely regional data to determine trauma service needs.
- Trauma service needs will be identified from accurate data reflective of the region.
- Identify capabilities of the region to determine Level I, II, III and IV classification.
- Trauma service needs and resources will be evaluated by the NEKRTC on an annual basis.

Activities in Progress

- The NEKRTC will continue support of the regional Kansas Trauma Registry and Kansas Trauma Program. Progress will be monitored.

Planned Activities

- The NEKRTC will determine needs and resources based on the NEKRTC Trauma Capabilities Assessment and the Kansas Trauma Registry data.
- Based on regional data, the NEKRTC will encourage development of additional resources to address needs.

Long-Term Goals

- Trauma service needs will be identified using accurate data representative of the entire region.
- Every community will have access to trauma services.
- Obtain funding for the trauma facility classification process.

D(b) Regional trauma services

The University of Kansas Hospital is the only ACS verified trauma center in the region. Hospitals with dedicated trauma services include Overland Park Regional Medical Center (Overland Park, Johnson County) that is recognized by their local authority as a trauma center. The hospital is in the process of verification and is seeking ACS Level II status. Stormont-Vail Healthcare (Topeka, Shawnee County) has a trauma service.

Needs Analysis

- Regional data from the Kansas Trauma Registry is necessary to evaluate and identify needs related to regional trauma services. The NEKRTC Trauma Capabilities Assessment should be analyzed for needs and resources related to trauma services.

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Objectives

- Obtain accurate and timely regional data to determine regional trauma service needs.
- Trauma service needs will be identified from accurate data reflective of the region.
- Identify capabilities of region to determine Level III and IV status.
- Regional trauma service needs and resources will be evaluated by the NEKRTC on an annual basis.

Activities in Progress

- The NEKRTC will continue support of the regional Kansas Trauma Registry and Kansas Trauma Program. Progress will be monitored.

Planned Activities

- The NEKRTC will determine needs and resources based on the NEKRTC Trauma Capabilities Assessment and Kansas Trauma Registry data.
- Based on regional data, the NEKRTC will encourage development of more resources to address needs.

Long-Term Goals

- Trauma service needs will be identified using accurate data representative of the entire region.

D(c) Pediatric trauma services

Children's Mercy Hospital located in Kansas City, Missouri is a state designated Level I pediatric trauma care facility and receives the majority of pediatric patients from the NE region. The University of Kansas Hospital provides pediatric trauma care for children 14 and older. Many trauma patients, particularly pediatric and burn patients are transferred to hospitals out-of-state. (See Appendix E)

Needs Analysis

- Regional data from the Kansas Trauma Registry is necessary to evaluate and identify potential needs related to pediatric trauma services. The NEKRTC Trauma Capabilities Assessment should be analyzed for pediatric trauma service needs and resources.

Objectives

- Kansas Trauma Registry data and the NEKRTC Trauma Capabilities Assessment will be used to analyze pediatric trauma service needs and resources on an annual basis.

Activities in Progress

- The NEKRTC will continue support of the regional Kansas Trauma Registry and Kansas Trauma Program. Progress will be monitored.

Planned Activities

- The NEKRTC will determine needs and resources based on the NEKRTC Trauma Capabilities Assessment and Kansas Trauma Registry data.
- Based on regional data, the NEKRTC will encourage development of additional resources to address needs.

Long-Term Goals

- Pediatric trauma service needs will be identified using accurate data representative of the entire region.

D(d) Trauma Rehabilitation services

Several trauma rehabilitation services are available in the region located mostly in the Topeka and Kansas City area. See Appendix F for a list of trauma rehabilitation services.

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Needs Analysis

- Regional data from the Kansas Trauma Registry is necessary to evaluate and identify potential needs related to trauma rehabilitation services.

Objectives

- Kansas Trauma Registry data and the NEKRTC Trauma Capabilities Assessment will be used to analyze trauma rehabilitation needs and resources on an annual basis.

Activities in Progress

- The NEKRTC will continue support of the regional Kansas Trauma Registry and Kansas Trauma Program. Progress will be monitored.

Planned Activities

- The NEKRTC will determine needs and resources based on the NEKRTC Trauma Capabilities Assessment and Kansas Trauma Registry data.
- Based on regional data, the NEKRTC will encourage development of additional resources to address needs.

Long-Term Goals

- Trauma rehabilitation service needs will be identified using accurate data representative of the entire region.
- Rehabilitation services will be encouraged to participate in the NEKRTC.

E. Evaluation

E(a) Data Collection

Statewide development and implementation of the Kansas Trauma Registry started in 2001 and the NEKRTC hospitals actively participate in the Kansas Trauma Registry. The NEKRTC actively monitors and provides assistance to the 34 hospitals in the region with regard to Kansas Trauma Registry training and data reporting. In addition, the NEKRTC monitors the quality of registry data. Currently, the Kansas Trauma Program provides reports to the NEKRTC and hospitals regarding data submission and quality.

Needs Analysis

- Regional data from the Kansas Trauma Registry is needed. Comprehensive Kansas Trauma Registry data reports should be provided to the NEKRTC and hospitals.

Objectives

- The data will be both valid and reliable.
- All hospitals will report Kansas Trauma Registry data.
- Data quality and consistency will improve.
- Benchmarking against the National Trauma Data Bank (NTDB) will occur.
- Reports including all state required Kansas Trauma Registry data elements will be supplied to individual hospitals and the NEKRTC.
- Kansas Trauma Registry data will be used to establish a regional trauma system baseline of information.
- Develop a policy to track patients through multiple agencies for more accurate data collection.

Activities In Progress

- Currently, the NEKRTC monitors hospital data reporting and provides assistance to facilities that have not reported to increase compliance. The NEKRTC also monitors data quality and completeness consulting with the Kansas Trauma Program on strategies to improve data.
- The NEKRTC actively works with the Kansas Trauma Program to increase the amount of information reported to the NEKRTC and hospitals following data submission to complete the feedback loop.

Planned Activities

- The NEKRTC will continue to play an active role in monitoring and supporting hospitals with data reporting and quality.
- The NEKRTC will request information from the Kansas Trauma Registry to establish a baseline of the current regional trauma system.

Long-Term Goals

- 100% of hospitals and EMS agencies in the region will report Kansas Trauma Registry data.
- 100% of hospitals and EMS agencies in the region will report all state required Kansas Trauma Registry data elements.

E(b) Regional quality improvement

The Kansas Trauma Plan recommends a quality improvement plan, a plan for implementing performance improvement has ensued. A number of parameters have been identified to analyze as a region on a routine basis. The Kansas Trauma Registry and EMSsystem® will be used to accomplish evaluation.

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Needs Analysis

- There is a need for policy related to regional quality improvement activities based on Kansas Trauma Registry data and EMSsystem® data.

Objectives

- The NEKRTC will continue support of the regional Kansas Trauma Registry and the Kansas Trauma Program. Progress will be monitored.
- The NEKRTC will assist and support the efforts of the Kansas Trauma Program to develop a regional quality improvement program.

Activities In Progress

- Currently, the NEKRTC monitors hospital data reporting and provides assistance to facilities that have not reported data to increase compliance. The NEKRTC also monitors data quality and completeness consulting with the Kansas Trauma Program on strategies to improve data.
- The NEKRTC actively works with the Kansas Trauma Program to increase the amount of information reported to the NEKRTC and hospitals following data submission in order to complete the feedback loop.

Planned Activities

- The NEKRTC will continue to play an active role in monitoring and supporting hospitals with data reporting and quality issues.
- The NEKRTC will work with the Kansas Trauma Program and the legislature to define a regional quality improvement process.
- The NEKRTC will work with the Kansas Trauma Program and the legislature to develop non-discoverable language in policy development.

Long-Term Goals

- The NEKRTC in collaboration with the Kansas Trauma Program and the legislature will develop a quality improvement process and begin training and implementation in the region.
- Standardized and comprehensive Kansas Trauma Registry reports will be provided to the NEKRTC.
- Policies will be established for regional quality improvement.

E(c) Feedback loop to all aspects of regional operations

According to the "Committee on Trauma (1999), *Resources for Optimal Care of the Injured Patient: 1999*, American College of Surgeons, Chicago", closing the loop (result) means performance improvement efforts have the desired effect as determined by continuous evaluation. Demonstration of the continuous pursuit of performance improvement is essential to all trauma programs. The state has plans to develop a formal process by which information can be provided that is in compliance with state and federal regulations that will provide the NEKRTC with a feedback loop to all aspects of regional operations.

Needs Analysis

- The NEKRTC needs to develop a feedback loop system that will improve the regional trauma system.

Objectives

- The NEKRTC in collaboration with the Kansas Trauma Program and the legislature will develop a quality improvement process and begin training and implementation in the region.
- Standardized and comprehensive Kansas Trauma Registry reports will be provided to the NEKRTC.
- Policies will be established for regional quality improvement.

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Activities in Progress

- The NEKRTC supports the Kansas Trauma Registry by providing technical assistance to hospitals regarding Kansas Trauma Registry data quality and reporting issues.

Planned Activities

- The NEKRTC will request specific reports from the statewide Kansas Trauma Registry to address regional plan objectives.

Long-Term Goals

- A regional quality improvement process will be developed and implemented.

E(d) Process for reviewing data filters and specific occurrences as they arise

Currently, quality improvement activities occur in each facility. Regional quality improvement activities will occur as the regional quality improvement plan develops. Please refer to E(b) for additional information.

F. Injury Prevention and Control

F(a) Identification of resources within the region to address identified risk areas

Complete information is not available for the number or types of injury that occur in Kansas leaving the region with incomplete data to effect targeted injury prevention efforts. Currently, most injury prevention initiatives are not driven by regional injury data, but by territorial agendas or injury projections from national organizations such as the Centers for Disease Control (CDC) and state death data.

Several public and private agencies provide injury prevention services in the NE Region. In addition to a variety of private sector organizations such as hospitals and EMS agencies, state and county agencies such as Kansas SAFE KIDS Coalitions and Chapters, Kansas Highway Patrol, Kansas Department of Transportation (KDOT) and county health departments offer injury prevention programs and promote public education. Prevention programs are offered at the discretion of organizations in the region; however, a centralized resource for injury prevention programs and activities is not available leaving the system fragmented. Prevention programs are under funded and competition for the limited dollars occur between programs and organizations sharing similar, if not the same, goals.

Needs Analysis

- There is a lack of regional injury prevention data to drive prevention efforts. State and national data reveal that motor vehicle crashes are a leading killer of Kansans. A centralized source of prevention programs is not available leaving agencies within the region unaware of available injury prevention programs and how to access them. A regional injury prevention plan using registry data to address injuries has not been developed. Limited funds are available for prevention efforts and competition exists between organizations sharing the same goals.

Objectives

- Identify state and local partners for collaboration.
- Work with state and local partners to develop a centralized prevention programs database.
- Use registry data to develop regionalized injury prevention plan.
- Develop goals specifically addressing Motor Vehicle Crashes (MVCs) and falls by age group.
- Develop a policy platform that addresses regional support for legislative activity for child passenger safety.

Activities In Progress

- The NEKRTC has started to identify and work with local and state partners to develop a prevention programs database and website.
- The NEKRTC has started discussion with Kansas Trauma Program regarding use of Kansas Trauma Registry data to develop a regional injury prevention plan.

Planned Activities

- The NEKRTC is partnering with the Kansas Emergency Medical Services for Children (EMSC) project and the Kansas Safe Kids Coalition to provide information on available injury prevention programs in the region through a centralized database/website.
- Continued monitoring of Kansas Trauma Registry data to develop an injury prevention plan will continue and plan development will follow.
- Specific goals will be developed to address Motor Vehicle Crashes (MVCs) and falls by age group.

Long-Term Goals

- The region will be aware of, and actively use, the injury prevention database/website as a method of reporting and receiving information regarding injury prevention programs and events.
- A regional injury prevention plan will be developed in conjunction with regional partners using Kansas Trauma Registry data; consequently, programs will be implemented from a comprehensive plan reducing injury. A policy platform will be updated and approved on an annual basis.
- The Kansas Trauma Registry data will reveal a reduction in MVCs by age group.

G. Human Resources

G(a) Identify gaps in education and training

Education

The Kansas Trauma Program provided funding for trauma education from 2002 to 2004. The funding subsidized three trauma courses for physicians and mid-level practitioners, nurses, and EMS personnel that included Advanced Trauma Life Support (ATLS), Trauma Nurse Core Course (TNCC), and Pre-Hospital Trauma Life Support (PHTLS). In June 2004, the trauma education program was discontinued due to lack of funding. Currently, the aforementioned courses are offered at various facilities throughout the region. An additional course developed by the ACS has been provided in the region; the Rural Trauma Team Development Course (RTTDC) is designed for rural facilities that may not have the resources of a larger trauma center, but still cares for the occasional critically injured patient. In 2003, the NEKRTC conducted a needs assessment survey that indicated a need for trauma education in rural areas for EMS personnel, nurses and physicians.

Needs Analysis

- There is a lack of funding and resources for trauma education. The Kansas Trauma Program does not require trauma education for all providers who treat trauma patients. Staffing issues exist in rural and frontier areas making it challenging for providers to receive education. Technology for education initiatives is not available to all facilities in the region. Based on the 2003 NEKRTC Needs Survey, the NEKRTC has established PHTLS, TNCC, and the RTTDC as priority education programs needed in the region. A community education plan regarding the NEKRTC, trauma center classification, and the regional trauma plan needs to be developed and implemented.

Objectives

- The NEKRTC will support efforts to increase trauma education funding by assessing available resources and grant opportunities.
- The NEKRTC will assess ways to make education more accessible to rural and frontier areas and provide information to the Kansas Trauma Program.
- The NEKRTC will monitor technology issues and support increased technology use throughout the region.
- The NEKRTC will conduct two PHTLS courses, two RTTDC courses and one TNCC course in rural areas of the region.

Activities In Progress

- The NEKRTC communicates on an ongoing basis with The Kansas Trauma Program and ACT regarding education-funding needs.
- The NEKRTC is planning PHTLS and RTTDC courses in the region. A TNCC course is also planned.
- The NEKRTC is a partner with the Emergency Medical Services for Children (EMSC) program in the development of a statewide prevention/education database for web placement.

Planned Activities

- The NEKRTC, in conjunction with all RTCs, plans to approach local lawmakers and legislators regarding funding issues.
- Establish a regional plan to address pediatric education.
- Extend RTTDC to regions and explore grant and funding opportunities.
- Partner with committees addressing issues related to weapons of mass destruction to accomplish educational activities.
- Provide Pediatric Pre-Hospital Course (PPC) to twenty-five NE pre-hospital professionals.

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Long-Term Goals

- An increase in providers educated in trauma care will be recognized.
- The NEKRTC will become a recognized resource for trauma education and consultation.

G(b) Community Education

Educating a diverse community of healthcare organizations and professionals regarding the benefits of the trauma system is key to improving the system. Widespread community support for the trauma system is necessary for system improvement.

Needs Analysis

- Healthcare organizations and professionals need information regarding the NEKRTC mission and purpose, state trauma facility classification, NEKRTC Field Triage Protocol and the regional trauma plan.

Objectives

- Increase awareness in the healthcare community of the NEKRTC, state trauma facility classification, NEKRTC Field Triage Protocol and the regional trauma plan.

Activities in Progress

- Plan development.

Planned Activities

- The NEKRTC will develop a plan to address community education needs regarding the regional trauma system.

G(c) Develop process for facilitating number of trauma education programs provided within the region to meet any identified needs.

Currently, trauma education is provided at the discretion of each organization. The NEKRTC has plans to sponsor several trauma education courses throughout the region.

Needs Analysis

- Education is not centrally organized or provided based on regional needs identified through accurate regional data.

Objectives

- Encourage and support accurate regional data reports regarding education from Kansas Trauma Program and the Kansas Trauma Registry.
- Complete two PHTLS and two RTTDC courses targeting rural areas of the region.
- Complete at least one TNCC course targeting rural areas of the region.
- Complete two PPC courses targeting rural areas of the region.

Activities in Progress

- The NEKRTC has completed one PHTLS course and planning is under way for a PHTLS course in August 2005. One RTTDC course has been completed and a course is being coordinated for June 2005. One PPC course has been completed and one more is being planned. Planning has started on a TNCC course.

Planned Activities

- The NEKRTC will develop a comprehensive plan to address education.

Long-Term Goals

- The NEKRTC will receive financial support for trauma education.

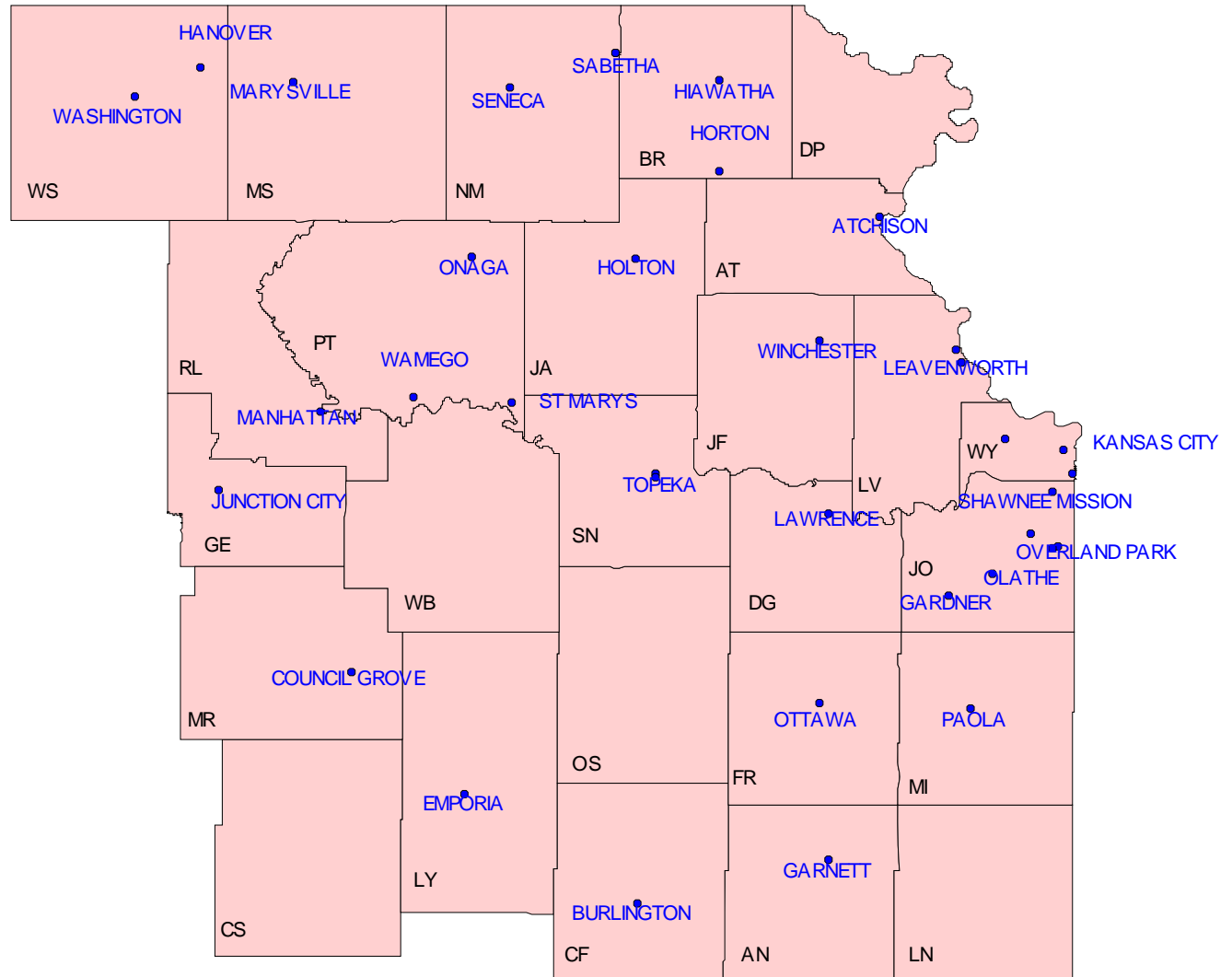
Appendix A

Northeast Trauma Region Map

NE Kansas Hospital Cities

Counties:

AN	Anderson
AT	Atchison
BR	Brown
CS	Chase
CF	Coffey
DP	Doniphan
DG	Douglas
FR	Franklin
GE	Geary
JA	Jackson
JF	Jefferson
JO	Johnson
LV	Leavenworth
LN	Linn
LY	Lyon
MS	Marshall
MI	Miami
MR	Morris
NM	Nemaha
OS	Osage
PT	Pottawatomie
RL	Riley
SN	Shawnee
WB	Wabaunsee
WS	Washington
WY	Wyandotte



Prepared 3/30/2005
KFMC

Appendix B

NEKRTC Member Organizations

Northeast Kansas Regional Trauma System Plan

Last Name	First Name	Title	Organization	Address	City	Zip	Phone
Foat	Charles		American Medical Response	401 SW Jackson	Topeka	66603	785-233-2400
Jenkins	Jason	MICT, TO-I, NREMT-P	American Medical Response	401 SW Jackson	Topeka	66603	785-233-2400 x 30
Keller	Ken	Director	American Medical Response	401 SW Jackson	Topeka	66603	785-224-0635
Nungesser	Don	Director	Anderson County EMS	P.O. Box 309	Garnett	66032	785-448-3131
Bertone	Diane	MSN, ARNP, Administrator	Anderson County Health Department	407 West 2nd Street	Garnett	66032	785-448-6559
Hachenberg	Dennis		Anderson County Hospital	421 South Maple	Garnett	66032-0309	785-448-3131
Pruner	Michael		Atchison County Health Department	616 Commercial Street	Atchison	66002	913-367-5152
Barnett	Danny	Director	Atchison County Rescue Services	506 Howard	Effingham	66023-9999	913-833-4025
Miller	Theresa	RN, ER Manager	Atchison Hospital	1301 North Second	Atchison	66002	913-367-2131
Harmon	Bob	EMS Director	Atchison Hospital EMS	1301 North Second	Atchison	66002	913-367-2621
Schmelzle	Laura	Director	Axtell Community Ambulance Service	806 Cone Street	Axtell	66403	785-736-2981
Claxton	John	Director	Bonner Springs EMS	205 East 2nd	Bonner Springs	66012	913-422-7744
Pruner	Michael		Brown County Health Department	907 South 2nd Street	Hiawatha	66434	785-742-2505
Feldkamp	Barbara	Director	Centralia Ambulance Service	410 Railroad	Centralia	66415	785-857-3516
Kohake	Denise		Centralia EMS	214 Oak	Centralia	66415	785-857-3907
Burright	Robert	Director	Chase County EMS	P.O. Box 568	Cottonwood Falls	66845	620-273-6590
Jones	Cheryl	RN, Administrator	Chase County Health Department	205 Broadway	Cottonwood Falls	66845	620-273-6377
Fowler	Milton	MD	Children's Mercy Hospital	5808 W 110th Street	Overland Park	66211	913-696-8262
Bencken	Crystal	RN Manager	Children's Mercy South Urgent Care Center	5808 West 110th Street	Overland Park	66211	913-696-8258
Felich	Noreen	RN	Children's Mercy Hospital	2401 Gillham Road	Kansas City	64108	816-234-3517
Holcom	Mark	RN, MA, CHE Director	Children's Mercy Hospital	2401 Gillham Road	Kansas City, MO	64108	816-234-3546
Tait	Nancy	Nurse Manger	Children's Mercy Hospital	5808 W 110th Street	Overland Park	66211	913-696-8262
Cook	Leland	Director	City of Washington EMS	301 C Street	Washington	66968	785-325-2344
Higgins	James	Director	Coffey County EMS	801 North 4th Street	Burlington	66839-0189	620-364-2121
Mueller	Susan	RN	Coffey County Health Department	110 South 6th	Burlington	66839	620-364-8631
George	Dennis	CEO	Coffey County Hospital	801 North Fourth Street	Burlington	66839-0189	620-364-2121
Weston	Elaine	RN	Coffey County Hospital	801 North 4th Street	Burlington	66839	620-364-2121
Allen	David	MD	Community Hospital Onaga	1603 West 4th	Holton	66436	785-364-3205
Becker	Elaine	Administrator	Community Hospital Onaga	120 West 8th Street	Onaga	66521	785-889-4272 ext. 1122
Bottom	Laura	DON	Community Hospital Onaga	120 West 8th Street	Onaga	66521	785-889-4274
Gilfillan	Ramona	RN	Doniphan County Health Department	201 Main	Troy	66087	785-985-3591
Stewart	Kenneth	Director	Doniphan County Rural Fire District # 2	Genesee and Illinois	Highland	66035	785-442-3273
Gordon	John		Fire District #11 EMS	P.O. Box 66	Valley Falls	66088	785-945-3731
Adams	Gwendolyn	Director	Frankfort Ambulance Service	109 North Kansas Avenue	Frankfort	66427-1323	785-292-4240

Northeast Kansas Regional Trauma System Plan

Last Name	First Name	Title	Organization	Address	City	Zip	Phone
McCurdy	Ted	Director	Franklin County Ambulance	219 East 14th Street	Ottawa	66067	785-229-7300
Davis	Kim	ARNP	Franklin County Health Department	1418 South Main, Suite 1	Ottawa	66067	785-229-3530
Bradley	David	CHE/CEO	Geary Community Hospital	1102 St. Mary's Road	Junction City	66441-0490	785-238-4131
Hiltgren	Wanda	Service Director	Greenleaf Ambulance Service	507 5th Street	Greenleaf	66943	785-747-2858
Bigham	Bryan	MD	Hiawatha Community Hospital	314 Oregon	Hiawatha	66434	785-742-2161
Blevins	Jeanne	RN	Hiawatha Community Hospital	300 Utah	Hiawatha	66434	785-742-2131
Moore	John	Administrator	Hiawatha Community Hospital	300 Utah	Hiawatha	66434	785-742-2131
Doyle	Pam	DON	Holton Community Hospital	1110 Columbine Drive	Holton	66436	785-364-2116
Hall	Roy		Holton Community Hospital	1110 Columbine Drive	Holton	66436	785-364-2116
Middleton	Joseph		Horton EMS	240 West 18th Street	Horton	66439	785-486-2642
Pruner	Michael		Jackson County Health Department	312 Pennsylvania	Holton	66436	785-364-2670
Haynes	Don	Director	Jefferson County Ambulance Service	1250 Walnut	Oskaloosa	66066	785-863-2275
Olson	Conrad		Jefferson County EMS	1250 Walnut	Oskaloosa	66066	785-863-2278
Huston	Joye	Administrator	Jefferson County Memorial Hospital	408 Delaware Street	Winchester	66097-4003	913-774-4340
Mitchell	Barbara		Johnson County Health Department	11875 South Sunset	Olathe	66061	913-477-8364
McFarlane	Ted	Director	Johnson County Med-Act	111 South Cherry, Suite 300	Olathe	66061	913-715-1960
Toon	Bill		Johnson County Med-Act	111 South Cherry, Suite 300	Olathe	66061	913-715-1950
Beffa	Mike		Junction City Fire Department	700 North Jefferson Street	Junction City	66441	785-238-6822
Hunter	Patricia	Administrator	Junction City- Geary County Health Department	P.O. Box 282	Junction City	66441	785-762-5788
McGuire	Kirsten	ARNP	Lawrence Memorial Hospital	325 Maine	Lawrence	66044	785-749-6237
Peterson	Bonnie	Administrator	Lawrence Memorial Hospital	325 Maine	Lawrence	66044	785-749-6135
Robinson	Scott	MD	Lawrence Memorial Hospital	325 Maine	Lawrence	66044	785-749-6162
Larson	Mark	MICT	Lawrence-Douglas County Fire and Medical	746 Kentucky Street	Lawrence	66044	785-832-7600
Tolefree	Eve		Lawrence-Douglas County Fire and Medical	746 Kentucky Street	Lawrence	66044	785-832-7600
Schnitker	Barbara	Director of Nursing	Lawrence-Douglas County Health Department	200 Maine, Suite B	Lawrence	66044	785-843-3060
Foster	Deanna		Leavenworth County EMS	1296 Eisenhower	Leavenworth	66048	913-250-8000
Morey	Pat	Director	Leavenworth County EMS	1296 Eisenhower	Leavenworth	66048	913-250-8000
Burns	Sylvia	RN	Leavenworth County Health Department	500 Eisenhower Road, Suite 101	Leavenworth	66048-4969	913-250-2039
Stamm	Tim		Leawood Fire Dept	4800 Town Center Drive	Leawood	66211	913-339-6700

Northeast Kansas Regional Trauma System Plan

Last Name	First Name	Title	Organization	Address	City	Zip	Phone
Hobbs	Kenneth	Director	Lenexa Fire Dept.	9620 Pflumm	Lenexa	66211	913-888-6380
Matzke	Brad		Life Star	P.O. Box 19224	Topeka	66619	785-862-5433
Hornung	Jeanette	MICT	Life Star of Kansas	950 T Avenue	Council Grove	66846	785-466-1480
Ondak	Anne Marie	Clinical Manager	Lifeflight Eagle	500 NW Richards Road	Kansas City	64116	816-283-9710
Shutt	Kent	Program Manager	Lifeflight Eagle	500 NW Richards Road	Kansas City	64116	816-283-9710
Zembles	Shawn	Director of FOPS	LifeNet Air Medical Services	134421 West 151st Street	Olathe	66062	913-397-9335
Ferguson	Jena	MICT	LifeNet Air Medical Transport	13421 West 151st, Suite 102	Olathe	66062	913-397-9335
Raboin	Tony	RN	LifeNet Air Medical Transport	13421 West 151st, Suite 102	Olathe	66062	913-397-9335
Voelker	Lisa	Director	Linn City Ambulance	P. O. Box 66	Linn	66953	785-348-5360
Bertone	Diane	MSN, ARNP, Administrator	Linn County Health Department	902 Main	Pleasanton	66075	913-352-6640
Binder	Bob	Director	Lyon County EMS	P.O. Box 928	Emporia	66801-0928	620-343-4230
Taylor	Jack		Lyon County EMS	PO Box 928	Emporia	66801-0928	316-342-5105
Hively	Renee	RN	Lyon County Health Department	420 West 15th	Emporia	66801	620-342-4864
Chaulk	Sharon	RN, Administrator	Marshall County Health Department	1201 Broadway	Marysville	66508	785-562-3485
Keller	James	Director	Marysville Ambulance Service	504 North 12th Street	Marysville	66508	785-562-2353
White	Jason		MAST	6750 Eastwood Traffic Way	Kansas City, MO	64129	816-924-1700
Chang	Cindy	MD	Menorah Medical Center	5721 West 119th Street	Overland Park	66209	913-498-6773
Bubak	Marcia	Administrator	Mercy Health Center	P. O. Box 1289	Manhattan	66505-1289	785-776-2884
Harper	Douglas	MD	Mercy Health Center of Manhattan	P.O. Box 1289	Manhattan	66505-1289	785-776-2864
Hall	Darren		Miami County EMS	P.O. Box 536	Paola	66071	913-294-5010
Welter	Mike	Director	Miami County EMS	P.O. Box 536	Paola	66071	913-294-5010
McKoon	Rita	RN, Administrator	Miami County Health Department	1201 Lakemary Drive	Paola	66071	913-294-2431
Adams	Charlotte	RN	Miami County Medical Center	2100 Baptiste Drive	Paola	66071-0365	913-294-6664
Garr	Brandee		Miami County Medical Center	2100 Baptiste Drive	Paola	66071-6704	913-294-6622
Steiner	Stacey	RN	Miami County Medical Center	2100 Baptiste Drive	Paola	66071-0365	913-294-6664
Bolen	Rachel	RN	Morris County Hospital	600 North Washington	Council Grove	66846	620-767-6811
Hornung	Joel	MD	Morris County Hospital	604 North Washington	Council Grove	66846	620-767-5126
Reagan	Jim	Administrator	Morris County Hospital	600 North Washington	Council Grove	66846	620-767-6811
Compton	Ty	RN	NE Kansas Center for Health and Wellness	240 West 18th Street	Horton	66439	785-486-2642
Richardson	Billy	MD	NE Kansas Center for Health and Wellness	240 West 18th Street	Horton	66439	785-486-2998
Meyer	Kaye	RN	Nemaha Valley Community Hospital	1600 Community Drive	Seneca	66538	785-336-6181
Tanking	Jane	Administrator	Nemaha Valley Community Hospital	1600 Community Drive	Seneca	66538	785-336-6181

Northeast Kansas Regional Trauma System Plan

Last Name	First Name	Title	Organization	Address	City	Zip	Phone
Taylor	Paula	CEO	Newman Regional Health	1201 West 12th	Emporia	66801-2597	620-343-6800
Tilson	Wayne	MD	Newman Regional Health	2904 Gill Avenue	Lawrence	66047	785-843-8056
Kvas	Pam	RN	Newman Regional Health	1201 West 12th	Emporia	66801	620-340-6132
Davlanter	Chris	MD	Olathe Medical Center	20333 West 151st Street	Olathe	66061	913-791-4357
Kolich	Cindy	D o Edu	Olathe Medical Center	20333 West 151st Street	Olathe	66062	913-791-4358
Rakes	Sherry	Administrator	Olathe Medical Center	20333 West 151st Street	Olathe	66062	913-791-4306
Meisenheimer	Linda	RN, Administrator	Osage County Health Department	103 East 9th Street	Lyndon	66451-0197	785-828-3117
Blow	Osbert	MD, PhD, FACS	Overland Park Regional Medical Center	10500 Quivira Road	Overland Park	66215	913-541-6052
Hicks	Kevin	CEO	Overland Park Regional Medical Center	10500 Quivira Road	Overland Park	66215	913-541-5301
Towster	Lois	ARNP, MSN, CCRN	Overland Park Regional Medical Center	10500 Quivira Road	Overland Park	66215	913-541-5605
Flanary	Tim		Potawatomi Tribal Emergency Services	15482 "K" Road	Mayetta	66509	785-966-2164
Price	David	Director	Potawatomi Tribal Emergency Services	2002 SW 70th Terrace	Topeka	66619-1250	785-966-2164
Smith	Brian	Director of Emergency Medical Services	Pottawatomie County EMS	711 Genn Drive	Wamego	66547	785-456-1520
Hodges	Daina		Pottawatomie County Health Department	320 Main	Westmoreland	66549	785-457-3719
Dailey	Mary	Administrator	Providence Medical Center	8929 Parallel Parkway	Kansas City	66112	913-596-4855
Scarborough	Mark	MD	Providence Medical Center	8929 Parallel Parkway	Kansas City	66112	913-596-4180
Felix	Larry	CEO	Ransom Memorial Hospital	1301 South Main Street	Ottawa	66067-3598	785-229-8200
Murphy	Charles		Riley County - Manhattan Health Department	2030 Tecumseh Road	Manhattan	66505	785-776-4779
Couchman	Larry	Director	Riley County EMS	2011 Claflin Road	Manhattan	66502	785-539-3535
Rutherford	Michelle		Riley County EMS	2011 Claflin Road	Manhattan	66502	785-539-3535
Buurman	Rita	Administrator	Sabetha Community Hospital	P.O. Box 229	Sabetha	66534	785-284-2121
Longabaugh	James	D.O.	Sabetha Community Hospital	P.O. Box 229	Sabetha	66534	785-284-2121
Schoening	Diane	RN	Sabetha Community Hospital	P.O. Box 229	Sabetha	66534	785-284-1512
Mowder	Elaine	Training Officer	Sabetha Emergency Service	805 Main	Sabetha	66534	785-284-2112
Campbell	Steve	Director	Sabetha EMS	805 Main	Sabetha	66534	785-284-2739
Quirin	Julie	CEO	Saint Luke's South Hospital	12300 Metcalf	Overland Park	66213	913-317-7904
Schmelzle	Michael	Director	Seneca Ambulance Service	603 Main	Seneca	66538	785-336-2747
Clancy	J.D.	ADM	Shawnee County Health Agency	1615 SW 8th Avenue	Topeka	66606	785-368-2086

Northeast Kansas Regional Trauma System Plan

Last Name	First Name	Title	Organization	Address	City	Zip	Phone
Hawkins	Sheri	CNO	Shawnee Mission Medical Center	9100 West 74th Street	Shawnee Mission	66204	913-676-2583
Kleinholz	John	MD	St. Francis Health Center	1700 West 7th Street	Topeka	66606	785-295-5437
Moore	Stuart	Administrator	St. Francis Health Center	1700 West 7th Street	Topeka	66606	785-295-7813
Saia	Carrie	RN	St. Francis Health Center	1700 West 7th Street	Topeka	66606	785-295-7963
Woods	Julia	RN, Manager	St. Luke's Hospital South	12300 Metcalf	Overland Park	66213	913-317-7458
Rice	Dorothy	Administrator	Stormont Vail HealthCare	1500 SW 10th Avenue	Topeka	66604	785-354-6105
Bandy	Christopher	Medical Director, Trauma Services	Stormont-Vail	1800 SW Cottonwood Lane	Topeka	66615	785-354-5470
Bassett	Marcus	MD	Stormont-Vail	1500 SW 10th Avenue	Topeka	66604-1353	785-354-6100
Whitlock	Darlene		Stormont-Vail Healthcare	415 Aquarius	Silver Lake	66539	785-354-5471
Reigle	James	Director	Town & Country Ambulance Services	110 North 2nd	Hiawatha	66434	785-742-7125
Cook	Elza	Director	Troy Community Ambulance	137 West Walnut	Troy	66087	913-985-2101
Moncure	Michael	MD	University of Kansas Medical Center	5027 Delp, 3901 Rainbow Boulevard	Kansas City	66160-7840	913-588-7230
Carlton	Liz	RN, MSN, CCRN	University of Kansas Medical Center	5025 Delp, 3901 Rainbow Boulevard	Kansas City	66160-7840	913-588-5428
Miller	Jan	RN	University of Kansas Medical Center	5025 Delp, 3901 Rainbow Boulevard	Kansas City	66160-7840	913-588-6536
Rogers	Linda		Wabaunsee County Health Department	215 Kansas (Courthouse)	Alma	66401	785-765-2425
Shreve	Melanie	RN	Wamego City Hospital	711 Genn Drive	Wamego	66547	785-456-2295
Rahe	Deanna		Washington County Health Department	115 West Third	Washington	66968	785-325-2600
Lutjemeier	Everett	Administrator	Washington County Hospital	304 East 3rd	Washington	66968	785-325-2211
Hoover	Lenar	RN	Washington County Hospital	304 East 3rd	Washington	66968	785-325-2211
Howe	Steve	Director	Washington EMS	301 "C" Street	Washington	66968	785-325-2284
Yungeberg	Caroline		Washington EMS	301 C Street	Washington	66968	785-325-2284
Worthington	Jeanette	Director	Waterville Ambulance	136 East Commercial	Waterville	66548	785-363-2367
Pagano	Biagio	Administrator	Wyandotte County Health Department	619 Ann Avenue	Kansas City	66101	913-573-6708

Appendix C

Frequency and EMD Centers in Kansas

Northeast Kansas Regional Trauma System Plan

	Description					Dispatch Band						Operational Band					
	Fire	EMS	Law Enforcement	Hospital	Other	CB	FM	VHF	UHF	800	Other	CB	FM	VHF	UHF	800	Other
Frequency	158	81	99	0	38	0	1	191	86	41	8	0	1	184	78	48	6
Percent	42%	22%	26%	0%	10%	0%	0%	58%	26%	13%	2%	0%	0%	58%	25%	15%	2%

ANDERSON ANDERSON COUNTY SHERIFF OFFICE 414 S. MAIN GARNETT, KS	ATCHISON ATCHISON COUNTY COMMUNICATIONS CENTER 518 PARALLEL ST. ATCHISON, KS
BROWN BROWN COUNTY SHERIFF'S DEPT. 706 UTAH ST. HIAWATHA, KS	CHASE CHASE COUNTY SHERIFF'S OFFICE P.O. BOX 628 COTTONWOOD FALLS, KS
COFFEY COFFEY COUNTY SHERIFF'S OFFICE P.O. BOX 226 BURLINGTON, KS 0226	DONIPHAN DONIPHAN COUNTY SHERIFF'S OFFICE P.O. BOX 32 TROY, KS
DOUGLAS DOUGLAS COUNTY EMERGENCY COMMUNICATIONS CENTER 111 E. 11TH ST. LAWRENCE, KS 2912	LYON EMPORIA POLICE DEPARTMENT 518 MECHANIC EMPORIA, KS
LYON EMPORIA STATE UNIVERSITY POLICE 1200 COMMERCIAL ST. EMPORIA, KS	FRANKLIN FRANKLIN COUNTY SHERIFF'S OFFICE 305 S Main St OTTAWA, KS 5087
GEARY GEARY COUNTY SHERIFF'S OFFICE 826 N Franklin St JUNCTION CITY, KS	BROWN HORTON POLICE DEPARTMENT 205 E. 8TH ST. HORTON, KS 0867
JACKSON JACKSON COUNTY SHERIFF'S OFFICE P.O. BOX 271 HOLTON, KS	JEFFERSON JEFFERSON COUNTY 911 COMMUNICATIONS 1230 WALNUT ST. OSKALOOSA, KS 0271
JEFFERSON JEFFERSON COUNTY SHERIFFS OFFICE 1360 WALNUT ST. OSKALOOSA, KS	JOHNSON JOHNSON COUNTY EMERGENCY COMMUNICATIONS 6000 LAMAR MISSION, KS 4201
JOHNSON JOHNSON COUNTY SHERIFF'S OFFICE 125 N. CHERRY OLATHE, KS	GEARY JUNCTION CITY POLICE DEPARTMENT 210 E. 9TH ST. JUNCTION CITY, KS
RILEY KANSAS STATE UNIVERSITY POLICE DEPT. 108 EDWARDS HALL MANHATTAN, KS 4809	BROWN KICKAPOO TRIBAL POLICE DEPARTMENT P.O. BOX 271 HORTON, KS

Northeast Kansas Regional Trauma System Plan

LEAVENWORTH LEAVENWORTH COUNTY SHERIFF 601 S. 3RD ST., STE 2007 LEAVENWORTH, KS 0271	JOHNSON LEAWOOD KANSAS POLICE DEPT. 9617 LEE BLVD. LEAWOOD, KS 2868
JOHNSON LENEXA POLICE DEPARTMENT 12500 W. 87TH ST. PKWY LENEXA, KS	LINN LINN COUNTY SHERIFF P.O. BOX 350 MOUND CITY, KS
LYON LYON CO. SHERIFFS DEPARTMENT 425 MECHANIC ST. EMPORIA, KS 0350	MARSHALL MARSHALL COUNTY SHERIFF DEPT. 107 S. THIRTEENTH MARYSVILLE, KS
MIAMI MIAMI COUNTY SHERIFF'S OFFICE 118 S. PEARL ST. PAOLA, KS	MORRIS MORRIS COUNTY SHERIFF'S DEPT. 501 W. MAIN ST. COUNCIL GROVE, KS 1755
NEMAHA NEMAHA COUNTY SHERIFF 212 N. 6TH ST. SENECA, KS	JOHNSON OLATHE POLICE DEPARTMENT 501 E. OLD 56 HWY OLATHE, KS 1718
OSAGE OSAGE COUNTY SHERIFF DEPT P.O. BOX 639 LYNDON, KS	JOHNSON OVERLAND PARK POLICE DEPARTMENT 12400 FOSTER OVERLAND PARK, KS
POTTAWATOMIE POTTOWATOMIE COUNTY SHERIFF DEPT. P.O. BOX 250 WESTMORELAND, KS 2629	JACKSON PRAIRIE BAND POTAWATOMI TRIBAL POLICE 16344 Q. ROAD MAYETTA, KS 0250
JOHNSON PRAIRIE VILLAGE POLICE DEPARTMENT 7710 MISSION RD. PRAIRIE VILLAGE, KS	RILEY RILEY COUNTY POLICE DEPT. 1001 S. SETH CHILD RD. MANHATTAN, KS 4281
BROWN SAC & FOX TRIBAL POLICE DEPARTMENT 401 ARCH RESERVE, KS	SHAWNEE SHAWNEE COUNTY EMERGENCY COMMUNICATIONS 320 SE KANSAS AVE, STE 300 TOPEKA, KS
JOHNSON SHAWNEE POLICE DEPT. 6535 QUIVIRA RD SHAWNEE, KS	DOUGLAS UNIVERSITY OF KS PUBLIC SAFETY 1256 WEST CAMPUS ROAD LAWRENCE, KS
WABAUNSEE WABAUNSEE COUNTY SHERIFF P.O. BOX 176 ALMA, KS 0176	SHAWNEE WASHBURN UNIVERSITY 1700 SW COLLEGE AVE TOPEKA, KS
WASHINGTON WASHINGTON COUNTY COMMUNICATIONS 301 B STREET WASHINGTON, KS	WYANDOTTE WYANDOTTE CO PUBLIC SAFETY COMM CENTER 6730 RIVERVIEW ST. KANSAS CITY, KS

Appendix D

Field Triage Guidelines

Northeast Kansas Regional Trauma System Plan

Northeast Kansas Regional Trauma Council Trauma Patient Field Protocol

The purpose of this model protocol is to develop a standard method of field decision-making and communication in regard to trauma patients for all prehospital services.

This model protocol assumes each prehospital service has the following capabilities or uses the following standard guidelines:

1. The prehospital agency uses the National Standard Triage Color Code System (refer to chart in this document)
2. The prehospital agency's dispatch center or medical direction utilizes the EMSsystem™ to monitor availability of all receiving hospitals capable of treating trauma patients
3. The prehospital agency utilizes a standardized trauma alert method to notify the receiving trauma facility of patient information
4. The prehospital agency utilizes Glasgow Coma Scale and Revised Trauma Score scales in assessing trauma adult patients and Pediatric Coma Scale and Pediatric Trauma Score for pediatric patients

The advantages of all prehospital agencies utilizing this model protocol are as follows:

1. Standardized decision making processes for choosing the most appropriate receiving facility for a trauma patient, especially in mutual aid incidents
 2. Standardized method of determining what receiving facilities are available utilizing EMSsystem™
 3. Standardized communication of patient information and trauma alert notification to all trauma receiving facilities
- I. Prehospital agencies should use the American College of Surgeons Field Triage Decision Scheme to identify those patients in need of trauma center referral. Patients suffering from significant burn injuries (as identified by the ACS Burn Center Referral Criteria), without the presence of major trauma, should be referred to a specialty Burn Center. Those patients with associated trauma in which the burn injury poses the greatest risk of morbidity and mortality should be directed to a specialty Burn Center.
- A. Patients involved in diving-related barotrauma that do not also have significant trauma to other body systems should be referred to a facility with a hyperbaric chamber.
 - B. Pediatric trauma patients should be referred to a designated pediatric trauma facility specializing in pediatric care.
 - C. Patients with uncorrectable airway compromise, patients in cardiac arrest, or those considered to be in impending cardiac arrest should be taken to the closest medical facility.
- II. Updated information on the status (ability to receive additional patients, and availability of Medical Resources) of area hospitals should be quickly accessed using the EMSsystem, and a decision must be made on the most appropriate receiving facility.
- III. For patients identified as Class I trauma patients, a decision must be made on the mode of transport that will most quickly deliver the patient to definitive care.
- A. When the patient is to be transported by helicopter, the air medical service's destination criteria will determine the receiving facility.
 - B. Weather conditions or other unavailability issues may prevent air medical transport of the patient, and ground transportation should be initiated.
 - C. Severe weather may make it too dangerous for any long distance transport, and the patient may have to be transported to the closest medical facility.

Northeast Kansas Regional Trauma System Plan

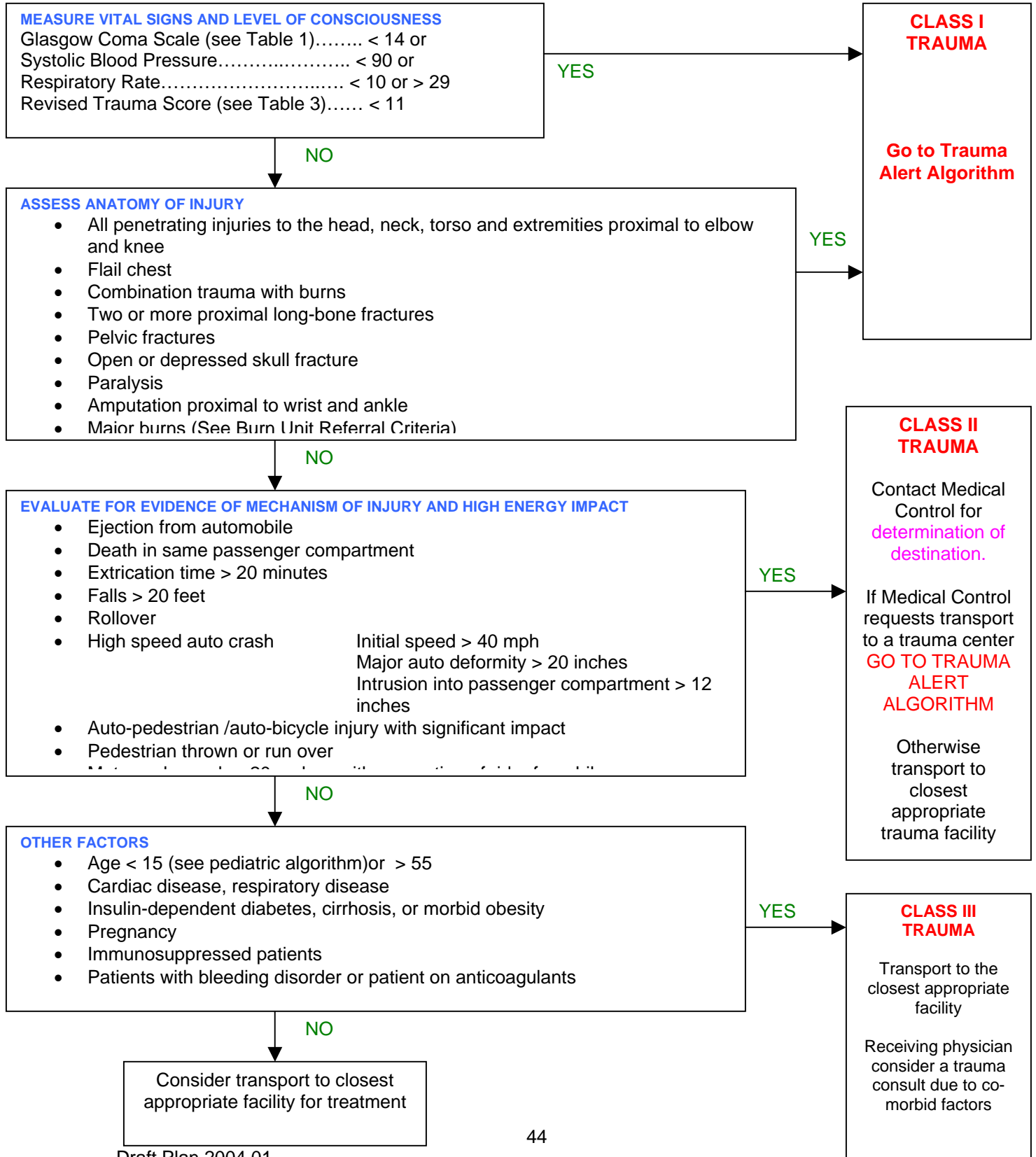
- IV. EMS field providers should contact their representative Medical Control for patients identified as a Class II trauma alert and ascertain which facility is the most appropriate for the patient.
- V. If transport of the patient will be done by ambulance, the receiving facility should be contacted to initiate a Trauma Alert.
 - A. The Lead Technician for the patient should alert the facility with the following:
 - 1. Notification of level (Class I - III) of Trauma Alert
 - 2. Age
 - 3. Mechanism of injury
 - 4. GCS
 - 5. ETA
 - B. A more detailed patient report can be communicated enroute.
- VI. This model protocol defines all the standard systems and procedures necessary for all Kansas EMS services to:
 - A. consistently assess the severity of a trauma patient based upon national standards
 - B. consistently communicate a trauma alert to receiving trauma facilities
 - C. consistently make the best decision on transport destination to an appropriate trauma facility.

This model protocol stops short of making decisions that need to be made by each prehospital agency's medical control. Local medical control should define the following:

- A. When does local medical control (on-line or off-line) need to be involved in the transport destination decision of a trauma patient from the field that may bypass a closer medical facility?
- B. What are the closest, most appropriate trauma facilities with surgical intervention based upon time and distance?
- C. In some situations would stabilization at a closer medical facility without surgical intervention be appropriate?

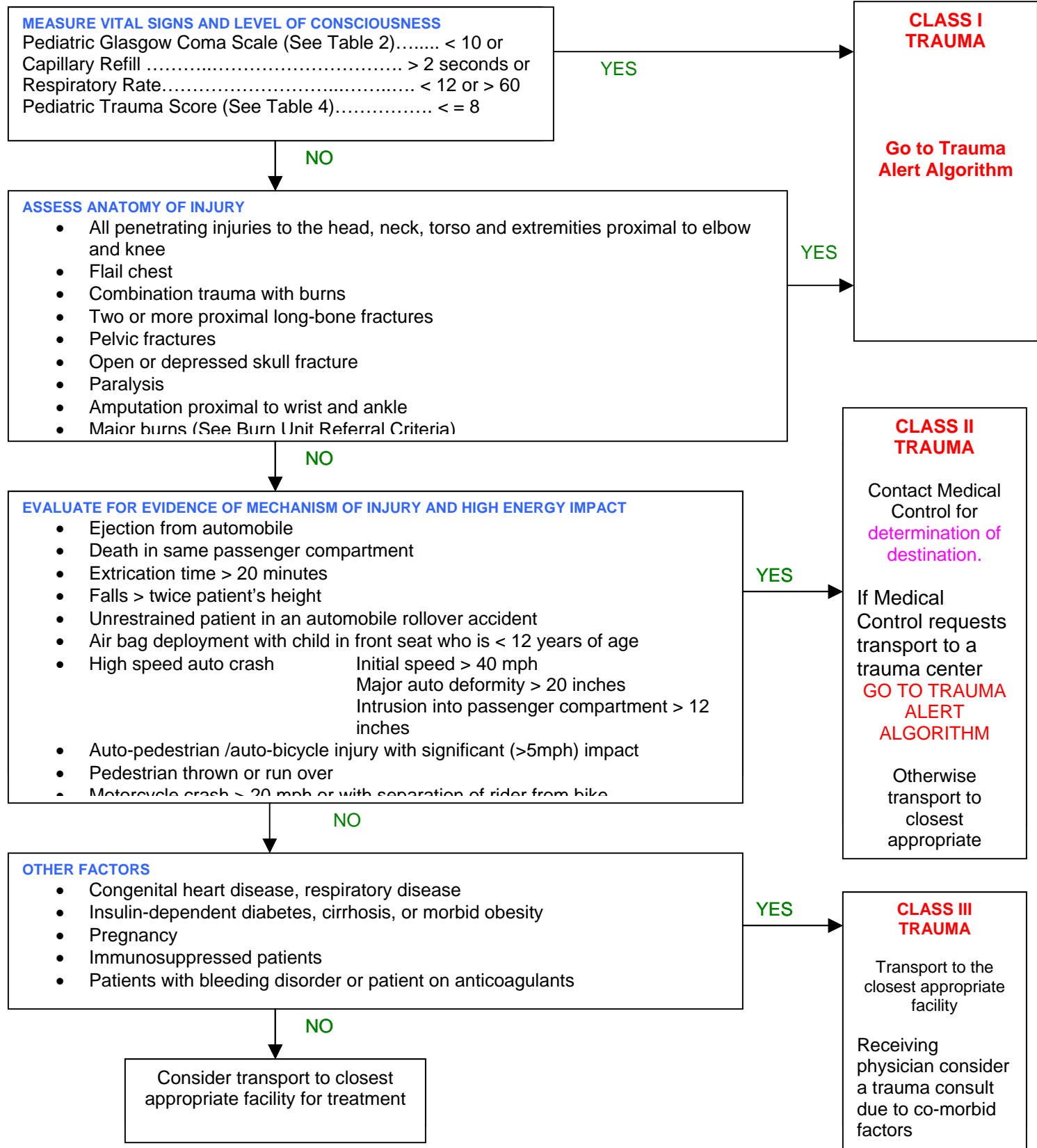
Northeast Kansas Regional Trauma System Plan

ADULT FIELD TRIAGE DECISION SCHEME



Northeast Kansas Regional Trauma System Plan

PEDIATRIC FIELD TRIAGE DECISION SCHEME



Northeast Kansas Regional Trauma System Plan

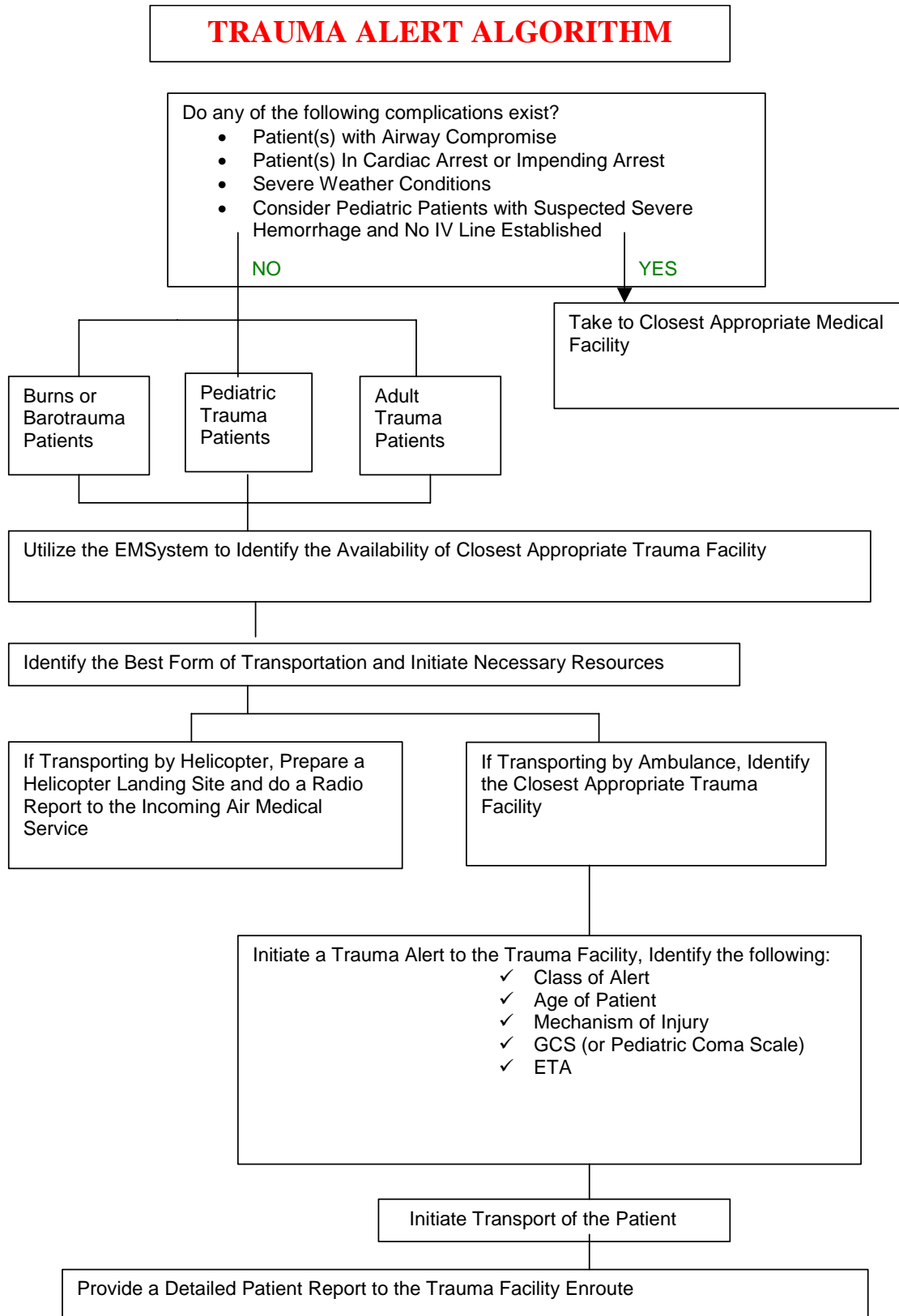


TABLE 1 – ADULT GLASGOW COMA SCALE

ADULT GLASGOW COMA SCALE			
E YE OPENING	Spontaneous	4	
	To voice	3	
	To pain	2	
	None	1	
V ERBAL RESPONSE	Oriented	5	
	Confused speech	4	
	Inappropriate words	3	
	Incomprehensible sounds	2	
	None	1	
M OTOR RESPONSE	Obeys commands	6	
	Localizes pain	5	
	Withdraws to pain	4	
	Abnormal flexion to pain	3	
	Abnormal extension	2	
	None	1	
E + V + M TOTAL GLASGOW COMA SCORE: (3-15)			

TABLE 2 – MODIFIED GCS FOR INFANTS AND CHILDREN

PEDIATRIC COMA SCALE					
Eye Opening		Best Verbal Response		Best Motor Response	
Spontaneously	4	Oriented, coos	5	Obeys commands	6
To speech	3	Words, irrit. cry	4	Localizes pain	5
To pain	2	Cries to pain	3	Withdraws from pain	4
None	1	Moans, grunts	2	Abnormal flexion	3
		None	1	Abnormal extension	2
				None	1
Less than 6 months - Best verbal response is to cry					
6 - 12 months - Normal infant makes noises					
> 12 months - Expect recognizable simple words					
5 years - Expect orientation					
E + V + M					
TOTAL SCORE 3 -15					

TABLE 3 – ADULT TRAUMA SCORE

ADULT REVISED TRAUMA SCORE			
A Glasgow Coma Score Conversion Points	GCS 13-15	4	
	GCS 9-12	3	
	GCS 6-8	2	
	GCS 4-5	1	
	GCS 3	0	
B Respiratory Rate	10 - 29	4	
	> 29	3	
	6 - 9	2	
	1 - 5	1	
	0	0	
C Systolic Blood Pressure	> 89	4	
	76 - 89	3	
	50 - 75	2	
	1 - 49	1	
	0	0	
A + B + C			
TOTAL REVISED TRAUMA SCORE: 0-12 Points			

TABLE 4 – PEDIATRIC TRAUMA SCORE

PEDIATRIC TRAUMA SCORE			
Age 15 and under			
Component	+2	+1	-1
Size	> 20 kg	10 - 20 kg	< 10 kg
Airway	Normal	Maintainable	Unmaintainable or intubated
Systolic Blood Pressure	> 90 mmHg	50-90 mmHg	< 50 mmHg
CNS	Awake	AMS / Obtunded	Coma / abnormal flexion
Skeletal injury	None	Closed fracture	Open / multiple fractures
Open wounds	None	Minor	Major / penetrating
<p>If the proper sized blood pressure cuff is not available, blood pressure can be rated as: +2 = palpable at wrist, +1 = palpable at groin, and -1 = no pulse palpable.</p> <p>A PTS of 8 or less indicates the need for evaluation at a Trauma Center. Scores range from -6 to +12.</p>			

TABLE 5 – BURN UNIT REFERRAL CRITERIA

A burn unit may treat adults or children or both.

Burn injuries that should be referred to a burn unit include the following:

1. Partial thickness burns greater than 10% total body surface area (TBSA)
2. Burns that involve the face, hands, feet, genitalia, perineum, or major joints
3. Third-degree (full thickness) burns in any age group
4. Electrical burns, including lightning injury
5. Chemical burns
6. Inhalation injury
7. Burn injury in patients with preexisting medical disorders that could complicate management, prolong recovery, or affect mortality
8. Any patients with burns and concomitant trauma (such as fractures) in which the burn injury poses the greatest risk of morbidity and mortality.

In such cases, if the trauma poses the greater immediate risk, the patient may be initially stabilized in a trauma center before being transferred to a burn unit. Physician judgment will be necessary in such situations and should be in concert with the regional medical control plan and triage protocols.

9. Burned children in hospitals without qualified personnel or equipment for the care of children
10. Burn injury in patients who will require special social, emotional, or long-term rehabilitative intervention

TABLE 6 - PREHOSPITAL TRIAGE COLOR CODES

(based upon the National Triage Color Code System)

**CODE
GREEN**

NONSERIOUS, NON LIFE THREATENING INJURY/ILLNESS

**CODE
YELLOW**

**SERIOUS, POTENTIALLY LIFE THREATENING
ILLNESS/INJURY**

**CODE
RED**

CRITICAL ILLNESS/INJURY

**CODE
BLUE**

ANY PATIENT IN RESPIRATORY AND/OR CARDIAC ARREST

**CODE
BLACK**

**ANY PATIENT WHO IS OBVIOUSLY DEAD OR A PATIENT
THAT HAS RESUSCITATION EFFORTS TERMINATED**

**CODE
ORANGE**

PSYCHIATRIC/BEHAVIORAL DISORDER

Appendix E

Pediatric/Adult Trauma Services

Northeast Kansas Regional Trauma System Plan

Pediatric Hospital Name	City	State	ACS Verification Level	State Designated	Number
Cardinal Glennon Children's Hospital	St. Louis	MO		Level I	314-577-5600
Children's Medical Center	Dallas	TX	Level I		214-456-7000
Children's Mercy Hospital & Clinics	Kansas City	MO		Level I pediatric - burn	866-512-2168*
Covenant Children's Hospital	Lubbock	TX	Level II Pediatric		806-725-1011
OK University Medical Center	Oklahoma City	OK	Level I Adult & Pediatric		405-271-KIDS (5437)
Shriners Hospital – Burn	Cincinnati	OH	Non Designated	Non Designated	800-875-8580*
Shriners Hospital – Burn	Galveston	TX	Non Designated	Non Designated	409-770-6600
Shriners Hospital – Orthopaedic and spinal cord injury	Chicago	IL	Non Designated	Non Designated	888-385-0161*
Shriners Hospital – Orthopaedic	St. Louis	MO	Non Designated	Non Designated	314-432-3600
St. Louis Children's Hospital	St. Louis	MO		Level I	800-678-KIDS*
The Children's Hospital	Denver	CO	Level I Pediatric		800-624-6553*
The Children's Hospital @ Parker Adventist	Parker	CO	Non Designated	Non Designated	303-269-4890
Trauma Centers and Hospitals	City	State	ACS Verification Level	State Designated	
COLORADO					
Denver Health Medical Center	Denver	CO	I		303-436-6000
Littleton Adventist Hospital	Littleton	CO		II	303-730-8900
Memorial Hospital	Colorado Springs	Co		II	800-826-4889*
National Jewish Medical & Research Center	Denver	CO	Non Designated	Non Designated	800-222-5864*
North Colorado Medical Center	Greeley	CO	II		970-352-4121
Parkview Medical Center	Pueblo	CO		II	800-543-8984*
Penrose St. Francis Health Services	Colorado Springs	CO		II	719-776-5000
Porter Adventist Hospital	Denver	CO	Non Designated	Non Designated	303-778-1955
Poudre Valley Hospital	Ft. Collins	CO	II		970-482-3328
Presbyterian/St. Lukes Med Ctr.	Denver	CO	Non Designated	Non Designated	303-839-6000
St Mary-Corwin Med Ctr.	Pueblo	CO	II		800-228-4039*
St. Anthony Central Hospital	Denver	CO	I		303-629-3846

* - This is a toll free number that can be reached nationwide

Northeast Kansas Regional Trauma System Plan

St. Marys Hospital & Med Ctr	Grand Junction	CO		II	800-458-3888*
Swedish Medical Center	Englewood	CO	I		303-788-5000
The Medical Center of Aurora	Aurora	CO		II	888-265-4265*
University of Colorado Hospital Authority	Denver	CO		II	303-372-0000
IOWA					
Alegent Mercy Hospital Southwest Iowa Medical Center	Council Bluffs	IA		Level III	712-328-5000
Iowa Methodist Medical Center	Des Moines	IA	Level I		515-241-6212
Jennie Edmundson Hospital	Council Bluffs	IA		Level III	712-396-6000
Mercy Medical Center	Des Moines	IA	Level II		515-247-3121
Mercy Medical Center	Sioux City	IA	Level II		800-352-3559*
University of Iowa Health Care	Iowa City	IA	Level I		800-777-8442*
KANSAS					
Salina Regional Health Center	Salina	KS	not designated	not designated	785-452-7000
St. Francis Health Center	Topeka	KS	not designated	not designated	785-354-6000
Stormont-Vail Health Care	Topeka	KS	not designated	not designated	800-444-2954
University of Kansas Hospital	Kansas City	KS	Level I		800-332-4199
Via Christi St. Francis	Wichita	KS	Level I		800-362-0070
Wesley Medical Center	Wichita	KS	Level I		800-362-0288
MISSOURI					
Barnes-Jewish Hospital	St. Louis	MO	Level I		314-747-3000
Cox Medical Center	Springfield	MO		Level II	417-269-3000
De Paul Health Center	Bridgeton	MO		Level II	314-344-6000
Freeman Hospital	Joplin	MO		Level II	800-477-6610*
Heartland Regional Medical Center	St. Joseph	MO		Level II	800-443-1143*
Independence Regional health Center	Independence	MO		Level II	816-836-8100
Liberty Hospital	Liberty	MO		Level II	816-781-7200
North Kansas City Hospital	N. Kansas City	MO		Level II	816-691-2000

* - This is a toll free number that can be reached nationwide

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Research Medical Center	Kansas City	MO		Level II	816-276-4000
St. Anthony Medical Center	St Louis	MO		Level II	314-525-1000
St. John's Mercy	St. Louis	MO		Level 1	314-569-6000
St. John's Regional health Center	Springfield	MO		Level I	417-820-2000
St. John's Regional Medical Center	Joplin	MO		Level II	417-781-2727
St. Joseph Health Center	St. Charles	MO		Level II	636-947-5000
St. Louis University	St. Louis	MO		Level I	314-577-8000
St. Luke's	Kansas City	MO		Level I	816-932-6220
Truman Medical Center	Kansas City	MO		Level 1	816-404-1000
University of Missouri	Columbia	MO	Level I		573-882-4141
NEBRASKA					
Bryan/LGH Medical Center West,	Lincoln	NE	Level II		800-742-7845*
Good Samaritan Hospital	Kearney	NE	Level II		308-865-7100
Regional West Medical Center	Scottsbluff	NE	Level II		308-635-3711
University of Nebraska Medical Center	Omaha	NE		Level I	402-559-4000
OKLAHOMA					
Oklahoma University Medical Center	OKC	OK	Level I		405-271-4700
TEXAS					
Baptist St. Anthony's Health System	Amarillo	TX	Non Designated	Non Designated	806-212-2000
Covenant Medical Center	Lubbock	TX	Level II		806-725-1011
University Medical Center	Lubbock	TX	Level I		806-775-8200

* - This is a toll free number that can be reached nationwide

Appendix F

**NE Region Hospitals
Military Hospitals
Specialty Services
Rehabilitation Services**

Northeast Kansas Regional Trauma System Plan

HOSPITAL	ADDRESS	CITY	ZIP	CARF	Website	Phone
<i>Atchison Hospital Association</i>	1301 N. Second	Atchison	66002		http://www.atchisonhospital.org	(913) 367-1618
Coffey County Hospital	801 N. 4 th Street P.O. Box 189	Burlington	66839		http://www.coffeyhealth.org	(620) 364-2121
Morris County Hospital	600 N. Washington P.O. Box 275	Council Grove	66846		http://www.mrcohosp.com	(620) 767-6811
Newman Regional Health	1201 West 12 th Ave.	Emporia	66801		http://www.newmanrh.org	(620) 341-7801
Anderson County Hospital	421 S. Maple P.O. Box 309	Garnett	66032			(785) 448-3131
Hanover Hospital	205 S. Hanover P.O. Box 38	Hanover	66945			(785) 337-2214
Hiawatha Community Hospital	300 Utah A P#420	Hiawatha	66434			(785) 742-6558
Holton Community Hospital	1110 Columbine Drive	Holton	66436		http://www.rhrjc.org	(785) 364-4233
NE Kansas Center for Health and Wellness, Inc.	240 West 18 th Street	Horton	66439			(785) 486-2642
Geary Community Hospital	1102 St. Mary's Road P.O. Box 490	Junction City	66441		http://www.gchks.org	(785) 238-5278
Providence Medical Center – Providence Health	8929 Parallel Parkway	Kansas City	66112		http://www.providence-health.org	(913) 596-4000
University of Kansas Hospital	3901 Rainbow Blvd.	Kansas City	66160	X	http://www.kumed.com	(913) 588-1270
Lawrence Memorial Hospital	325 Main St.	Lawrence	66044	X	http://www.lmh.org	(785) 749-6100
Cushing Memorial Hospital	711 Marshall	Leavenworth	66048			(913) 684-1102
St. John Hospital	3500 S. Fourth	Leavenworth	66048		http://www.providence-health.org	(913) 680-6000
Mercy Regional health Center, Inc.	P.O. Box 1289 1823 College Ave.	Manhattan	66505		http://www.mercyhealthcenter.org	(785) 776-3322
KSU Lafene Health Center	1105 Sunset Ave.	Manhattan	66502		http://www.ksu.edu/lafene	(785) 532-7755
Community Memorial Healthcare, Inc.	708 N. 18 th Street	Marysville	66508		http://www.cmhcare.org	(785) 562-2311
Olathe Medical Center, Inc.	20333 W. 151 st St.	Olathe	66061		http://www.omci.com	(913) 791-4200
Community Hospital Onaga/St. Marys	120 W. 8 th Street	Onaga	66521		http://www.chcs-ks.org	(785) 889-4272
Ransom Memorial Hospital	1301 S. Main	Ottawa	66067		http://www.ransom.org	(785) 229-8200
Children's Mercy South	5808 W. 110 th St.	Overland Park	66211		http://www.childrens-mercy.org	(913) 696-8000
Menorah Medical Center	5721 W. 119 th St.	Overland Park	66209		www.menorahmedicalcenter.org	(913) 498-6000
Overland Park Regional Medical Center	10500 Quivira Road	Overland Park	66215		http://www.oprmc.com	(913) 541-5000
Saint Luke's South Hospital	12300 Metcalf Ave.	Overland Park	66213		www.saintlukeshealthsystem.org	(913) 317-7904
Miami County Medical Center, Inc.	2100 Baptiste Dr. P.O. Box 365	Paola	66214		http://www.omci.com	(913) 294-2327

Northeast Kansas Regional Trauma System Plan

HOSPITAL	ADDRESS	CITY	ZIP	CARF	Website	Phone
Sabetha Community Hospital, Inc.	14 th and Oregon P.O. Box 229	Sabetha	66534		www.sabethahospital.org	(785) 284-2121
Nemaha Valley Community Hospital	1600 Community Drive	Seneca	66538			(785) 336-6181
Shawnee Mission Medical Center	9100 W. 74 th St.	Shawnee Mission	66204		http://www.shawneemission.org	(913) 676-2000
St. Francis Health Center	1700 S.W. Seventh	Topeka	66606	X	http://www.stfrancistopeka.org	(785) 295-8993
Stormont-Vail HealthCare	1500 S.W. 10 th Ave.	Topeka	66604		http://www.stormontvail.org	(785) 354-6121
Wamego City Hospital	711 Genn Dr.	Wamego	66547		www.wamegocityhospital.com	(785) 456-2295
Washington County Hospital	304 E. Third St.	Washington	66968			(785) 325-2211
Jefferson CO. Memorial Hospital, Inc., and Geriatric Ctr.	408 Delaware St.	Winchester	66097			(913) 774-8605

Military Hospitals	ADDRESS	CITY	ZIP	CARF	Website	Phone
Irwin Army Community Hospital	600 Caisson Hill Road	Ft. Riley	66442		http://iach.amedd.army.mil/	(795) 239-7555
USAMEDDAC Munson Army Health Center	550 Pope Ave.	Ft. Leavenworth	66027		www.munson.amedd.army.mil/	(913) 684-6000
VA Eastern Kansas Health Care System	2200 Gage Blvd.	Topeka	66622			(785) 350-3111

Specialty Hospitals	ADDRESS	CITY	ZIP	CARF	Website	Phone
Emporia Ambulatory Surgery Center	2528 W. 15 th Ave.	Emporia	66801			(620) 343-2233
Emporia Surgical Hospital, LLC	1602 W. 15 th	Emporia	66801			(620) 342-8822
Heart of America Surgery Center	8935 State Avenue	Kansas City	66112			(913) 334-8935
KVC Psychiatric Hospital	4300 Brenner Dr.	Kansas City	66104			(913) 334-0294
Rainbow Mental health Facility	2205 W. 36 th Ave.	Kansas City	66103			(913) 789-5800
Lawrence Surgery Center	1112 W. Sixth St.	Lawrence	66044			(785) 832-0588
Skin & Mohs Surgery Center	11550 Granada St.	Leawood	66206			(913) 451-7546
Surgery Center of Leawood	11413 Ash	Leawood	66211			(913) 661-9977
Manhattan Surgical Center, LLC	1829 College Ave.	Manhattan	66502		www.manhattansurgical.com	(785) 776-5100
Olathe Surgical Associates	21080 W. 151 st	Olathe	66061			(913) 254-7330
The Headache & Pain Center	4801 College Blvd.	Leawood	66211			(913) 491-3999
Osawatomie State Hospital	Osawatomie Rd & Hospital Dr.	Osawatomie	66064			(913) 755-7073
ADS Ambulatory Surgery Center	6901 W. 121 st St.	Overland Park	66209			(913) 661-9260
Endoscopic Imaging Center, LLC	10200 W. 105 th St.	Overland Park	66212			(913) 492-0800

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<i>Specialty Hospitals</i>	ADDRESS	CITY	ZIP	CARF	Website	Phone
HEARTLAND Surgical Specialty Hospital	10730 Nall Ave.	Overland Park	66211			(913) 754-4506
Park Place Surgery Center, Inc.	14950 Newton Dr.	Overland Park	66223			(913) 685-3666
South KC Surgical Center, LLC	10730 Na.. Ave.	Overland Park	66211			(913) 941-0220
KU Midwest Ambulatory Surgery Center	7405 Renner Road	Shawnee	66160			(913) 588-8400
The Westglen Endoscopy Center	16663 Midland Drive	Shawnee	66217			(913) 248-8000
Ambulatory Surgery Center of KC, Inc.	9385 W. 75 th St.	Shawnee Mission	66204			(913) 383-8346
Shawnee Mission Surgery Center	9100 W. 74 th St.	Shawnee Mission	66204			(913) 676-7700
Cotton-O'Neil Clinic Endo. Ctr.	720 SW Lane	Topeka	66606		http://www.stormontvail.org	(785) 354-0538
Endoscopy and Surgery Center of Topeka	2200 S.W. Sixth Ave., Suite 103	Topeka	66606			(785) 354-1254
Tallgrass Surgical Center	6001 S.W. Sixth St.	Topeka	66615			(785) 272-8807
Topeka Single Day Surgery	823 S.W. Mulvane St., Suite 101	Topeka	66606			(785) 354-8737
Washburn Surgery Center, LLC	920 S.W. Washburn Ave. East, Suite 3	Topeka	66606			(785) 235-3322
Valley Hope Alcohol & Drug Trt. Ctr.	1816 N. Second P.O. Box 312	Atchison	66002			(913) 367-1618

<i>Rehabilitation</i>	ADDRESS	CITY	ZIP	CARF	Website	Phone
Valley Hope Alcohol and Drug Treatment Center	1816 North Second Street	Atchison	66002			(913) 367-1618
Atchison Hospital – Physical Therapy	1301 N. 2 nd Street	Atchison	66002			(913) 367-6634
NEU Physical Therapy Center	930 Ames St.	Baldwin City	66006			(785) 594-4100
Kaw Valley Physical Therapy	13028 Kansas Ave	Bonner Springs	66012			(913) 422-8729
Emporia Surgical Hospital, LLC	1602 West 15 th Avenue	Emporia	66801			(620) 342-8822
Emporia Physical Therapy	1024 W. 12 th Avenue	Emporia	66801			(620) 342-4100
Newman Regional Health– Emporia Physical	1024 W. 12 th Ave.	Emporia	66801			(620) 342-4100
Meadowbrook Rehabilitation Hospital	427 West Main Street	Gardner	66030			(913) 856-8747
Physical & Respiratory Therapy Services, Inc.	700 Oregon St.	Hiawatha	66434			(785) 742-7606
Greater Kansas City Physical Therapy	4214 Kansas Ave.	Kansas City	66106			(913) 321-7557
Healthsouth Rehabilitation Center	1333 Meadowlark	Kansas City	66102			(913) 287-8815
Pro Rehabilitative Services Inc. Pa Clinic	400 N. 18 th St.	Kansas City	66102			(913) 321-8765

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Rehabilitation	ADDRESS	CITY	ZIP	CARF	Website	Phone
Professional Rehabilitative Service Inc Pa	8101 Parallel Parkway	Kansas City	66112			(913) 321-8765
Providence Medical Center – Rehabilitation Service	8929 Parallel Parkway	Kansas City	66112			(913) 596-4750
Bird Physical Therapy	535 Gateway Dr.	Lawrence	66049			(785) 331-0106
Bird Physical Therapy Dsgn	3220 Mesa Way, Suite A	Lawrence	66049			(785) 331-0107
Kreider Rehabilitation Svc.	325 Main Street	Lawrence	66044			(785) 840-2712
Lawrence Therapy Services LLC	2721 W. 6 th Street, Suite B	Lawrence	66049			(785) 842-0656
Lawrence Rehabilitation Clinic	3511 Clinton Parkway Place	Lawrence	66047			(785) 331-3783
Neu Physical Therapy Center	1305 Wakarusa Drive	Lawrence	66049			(785) 842-3444
Rainbow Mental Health Facility	2205 West 36 th	Kansas city	66103			(913) 384-4706
Therapyworks	1112 W 6 th Street	Lawrence	66044			(785) 749-1300
Professional Rehabilitation Specialists Pa	380 Limit Street	Leavenworth	66048			(913) 758-0283
St. Luke's Health System	711 Marshall Street	Leavenworth	66048			(816) 932-6220
Associated Physical Therapists of Kansas Pa	4707 College Boulevard	Leawood	66211			(913) 661-9928
Back Center & Physical Therapy	10727 El Monte Street	Leawood	66211			(913) 383-1330
Doctors Specialty Hospital, LLC	4901 College	Leawood	66211			(913) 529-1801
Healthsouth Rehabilitation Center – Overland Park	10727 El Monte Street	Leawood	66211			(913) 385-7850 (913) 341-9880
Kansas City Orthopedic Institute, LLC	3651 College Blvd.	Leawood	66211			(913) 319-7575
Sports Rehabilitation & Physical Therapy Associate	6362 College Blvd	Leawood	66211			(913) 663-2555
Columbia Overland Park Regional Medical Center	12200 W. 106 th Street, Suite 440	Lenexa	66215			(913) 541-5001
Etc. Physical Therapy – Lenexa	15502 College Boulevard	Lenexa	66219			(913) 888-5200
Rehabilitation Services Columbia Overland Park	12200 West 106 th	Lenexa	66215			(913) 541-5001
Technical Touch Physical Therapy	7926 Quivira Road	Lenexa	66215			(913) 492-5600
Technical Tough Physical Therapy	8605 Quivira Rd.	Lenexa	66215			(913) 492-5600
Baker Richard BMD	1600 Charles Place	Manhattan	66502			(785) 537-4200
Healthsouth	3244 Kimball Ave.	Manhattan	66503			(785) 539-7342
Holiday Allan DMD	1600 Charles Place	Manhattan	66502			(785) 537-4200
Joyce Chad Registered Physical Therapist	2600 Anderson Ave.	Manhattan	66502			(785) 537-4230
Manhattan Surgical Center, LLC	1829 College Avenue	Manhattan	66502			(785) 776-5100
Mercy Health Center – College Camput	1823 College Ave.	Manhattan	66502			(785) 776-3322

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Rehabilitation	ADDRESS	CITY	ZIP	CARF	Website	Phone
Kansas City Physicaltherapy Group	5800 Outlook Street	Mission	66202			(913) 384-5600
Kansas Sports Therapy Center	5830 Woodson Rd.	Mission	66202			(913) 677-5860
Occupational Physical Therapy	4901 Reinhardt Dr.	Mission	66205			(913) 993-9145
Healthsouth Rehabilitation Center – Olathe	1315 S. Fountain Drive	Olathe	66061			(913) 829-3133
Melling Ben Rpt	225 W. 151 st Street	Olathe	66061			(913) 829-2400
Miami County Medical Center	20375 W. 151 st St., Suite 351	Olathe	66061			(913) 791-4325
Olathe Medical Center – Rehabilitation Services	20333 West 151 st Street	Olathe	66061			(913) 791-4325
Spine Extremity Rehabilitation Center	300 S. Clairborne Rd., Suite B	Olathe	66062			(913) 782-7734
Advanced Physical Therapy & Sp Rehab	10460 Mastin St.	Overland Park	66212			(913) 492-7870
Associated Physical Therapists of Kansas	9391 W. 75 th St.	Overland Park	66204			(913) 381-1513
Blue Valley Physical Therapy	15100 Metcalf Ave., Suite 102	Overland Park	66223			(913) 897-1100
College Park Physical Therapy	10100 W. 119 th Street, Suite 150	Overland Park	66213			(913) 469-8878
College Park Family Care Center, PA	11755 W. 112 th St.	Overland Park	66210			(913) 469-5579
ETC Physical Therapy – Overland Park	10381 Metcalf Avenue	Overland Park	66212			(913) 649-9090
Guided Motion Therapy & Wellness Center	9200 Glenwood St., Suite 101	Overland Park	66212			(913) 341-7588
Heartland Surgical Specialty Hospital	10720 Nall	Overland Park	66211			913-754-4505
Louisburg Physical Therapy	15100 Metcalf Ave., Suite 102	Overland Park	66223			(913) 837-2080
Mid-America Rehabilitation Hospital	5701 W. 110 th St.	Overland Park	66211			(913) 491-2400
Midwest Laser Therapy	10000 W. 7 th St., Suite 200	Overland Park	66204			(913) 236-9955
Overland Park Regional Medical Center – Rehabilitation	12200 W. 106 th	Overland Park	66204			(913) 541-5001
Saint Luke's Health System	12330 Metcalf Avenue, Suite 400	Overland Park	66213			(816) 932-6220
Select Specialty Hospital of Kansas City	10550 Quivira Road, Suite 450	Overland Park	66215			(913) 541-3227

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Rehabilitation	ADDRESS	CITY	ZIP	CARF	Website	Phone
Saint Luke's South – Rehabilitation	12300 Metcalf Ave.	Overland Park	66213			(913) 317-7341
Shawnee Mission Medical Center	9100 W. 7 th St.	Overland Park	66204			(913) 676-2000
Specialty Hospital of Mid-America	6509 W. 103 rd St.	Overland Park	66212			(913) 649-3701
Therapeutic Health Services	10520 Barkley Street	Overland Park	66212			(913) 381-5944
Therapy Associates	West 110 th Street	Overland Park	66210			(913) 647-1102
Miami County Medical Center	2100 Baptiste Dr.	Paola	66071			(913) 294-6679
Professional Rehabilitative Services, Inc. Pa	310 N. Hospital Drive #A	Paola	66071			(913) 321-8765 (913) 294-2552
Select Rehabilitation	340 South St.	Richmond	66080			(785) 835-9995
Kaw Valley Physical Therapy	907 E. Jesuit Lane	Saint Mary's	66536			(785) 437-2663
St. Mary's Physical Occupational Speech Therapy	206 S. Grand Ave.	Saint Mary's	66536			(785) 437-3768
Healthsouth Rehabilitation Center – Lenexa	7860 Quivira Road	Shawnee	66216			(913) 962-8300
Professional Rehabilitative Services, Inc Pa	8825 W. 75 th	Shawnee Mission	66276			(913) 321-8765
Neu Physical Therapy Center	1198 Front Street	Tonganoxie	66086			(913) 845-2252
Advance Rehabilitation	6001 SW 6 th Ave., Suite 230	Topeka	66615			(785) 273-7439
Best Gary Physical Therapy Center	1119 SW Gage Blvd., Suite B.	Topeka	66604			(785)-271-1771
Bloom & Associates Therapy	1045 SW Gage Blvd.	Topeka	66604			(785) 273-7700
Dynamic Health	2907 SW Topeka Blvd.	Topeka	66611			(785) 267-3323
Interactive Physical Therapy	4731 NW Hunters Ridge Circle	Topeka	66618			(785) 246-2300
Kansas Neurological Institute	3107 W. 21 st St.	Topeka	66604			(785) 296-5301
Kansas Physical Therapy Association	1200 SW 10 th Ave.	Topeka	66604			(785) 233-5400
Kansas Rehabilitation Hospital	1504 S.W. Eighth Ave.	Topeka	66606		http://www.healthsouth.com	(785) 235-6600
Physical Therapy Center	1119 SW Gage Blvd, Suite B	Topeka	66604			(785) 271-1771
Pilates Performance & Rehabilitation	905 SW 37 th Terrace	Topeka	66609			(785) 267-5896
Rebound Physical Therapy	5220 SW 17 th , #131	Topeka	66604			(785) 271-5533
Select Specialty Hospital of Topeka	1700 S.W. Seventh St., Suite 840	Topeka	66606		www.selectmedicalcorp.com	(785) 295-5551

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<i>Rehabilitation</i>	<i>ADDRESS</i>	<i>CITY</i>	<i>ZIP</i>	<i>CARF</i>	<i>E-Mail</i>	<i>Phone</i>
St. Francis Health Center – Rehabilitation Services	1700 SW 7 th St. #840	Topeka	66606	X		(785) 295-8346
Women's Health Therapies	905 SW 37 th Terrace	Topeka	66609			(785) 221-9937
Wamego City Hospital – Physical Therapy	711 Genn Dr.	Wamego	66547			(785) 456-1658 (785) 456-1660
Washington County Hospital	304 E. 3 rd St.	Washington	66968			(785) 325-2211

Appendix G

Glossary

GLOSSARY

Advanced Trauma Life Support (ATLS) - a course developed and sponsored by the American College of Surgeons Committee on Trauma for physicians which covers trauma knowledge and Skills.

Basic Trauma Life Support (BTLS) - a course for pre-hospital care providers sponsored by the American College of Emergency Physicians.

bypass - transport of an EMS patient past a normally used EMS receiving facility to a designated medical facility for the purpose of accessing more readily available or appropriate medical care.

citizen access - the act of requesting emergency assistance for a specific event.

communications system - a collection of individual communication networks, a transmission system, relay stations, and control and base stations capable of interconnection and interoperation that are designed to form an integral whole. The individual components must serve a common purpose, be technically compatible, employ common procedures, respond to control, and operate in unison.

designation - formal recognition of hospitals as providers of specialized services to meet the needs of the severely injured patient; usually involves a contractual relationship and is based on adherence to standards.

disaster - any occurrence that causes damage, ecological destruction, loss of human lives, or deterioration of health and health services on a scale sufficient to warrant an extraordinary response from outside the affected community area.

dispatch - coordination of emergency resources in response to a specific event.

emergency medical services for children (EMS-C) - an arrangement of personnel, facilities and equipment for the effective and coordinated delivery of emergency health services to infants and children that is fully integrated within the emergency medical system of which it is a part.

emergency medical services system (EMS) - a system that provides for the arrangement of personnel, facilities, and equipment for the effective and coordinated delivery of health care services in appropriate geographical areas under emergency conditions.

field categorization (classification) - a medical emergency classification procedure for patients that is applicable under conditions encountered at the site of a medical emergency.

inclusive trauma care system - a trauma care system that incorporates every health care facility in a community in a system in order to provide a continuum of services for all injured persons who require care in an acute care facility; in such a system, the injured patient's needs are matched to the appropriate hospital resources.

injury - the result of an act that damages, harms, or hurts; unintentional or intentional damage to the body resulting from acute exposure to thermal, mechanical, electrical or chemical energy or from the absence of such essentials as heat or oxygen.

injury control - the scientific approach to injury that includes analysis, data acquisition, identification of problem injuries in high risk groups, option analysis and implementing and evaluating countermeasures.

injury prevention - efforts to forestall or prevent events that might result in injuries.

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injury rate - a statistical measure describing the number of injuries expected to occur in a defined number of people (usually 100,000) within a defined period (usually 1 year). Used as an expression of the relative risk of different injuries or groups.

lead agency - an organization that serves as the focal point for program development on the local, regional or State level.

major trauma - that subset of injuries that encompasses the patient with or at risk for the most severe or critical types of injury and therefore requires a systems approach in order to save life and limb.

mechanism of injury - the source of forces that produce mechanical deformations and physiologic responses that cause an anatomic lesion or functional change in humans.

medical control - physician direction over pre-hospital activities to ensure efficient and proficient trauma triage, transportation, and care, as well as ongoing quality management morbidity the relative incidence of disease.

MERGe - The Major Emergency Response Group (MERGe) is a system of preparation, response, and recovery for major emergency medical events affecting licensed ambulance services for disaster management within Kansas.

mortality - the proportion of deaths to population.

off-line medical direction - the establishment and monitoring of all medical components of an MS system, including protocols, standing orders, education programs, and the quality and delivery of online control.

on-line medical direction - immediate medical direction to pre-hospital personnel in remote locations (also know as direct medical control) provided by a physician or an authorized communications resource person under the direction of a physician.

overtriage - directing patients to trauma centers when they do not need such specialized care. Overtriage occurs because of incorrect identification of patients as having severe injuries when retrospective analysis indicates minor injuries.

Pre-hospital Trauma Life Support (PHTLS) - a verification course for pre-hospital care providers that teaches concepts of basic and advanced trauma life support. It is developed and sponsored by the National Association of Emergency Medical Technicians in cooperation with the American College of Surgeons Committee on Trauma.

protocols - standards for EMS practice in a variety of situations within the EMS system.

quality improvement - a method of evaluating and improving processes of patient care which emphasizes a multidisciplinary approach to problem solving, and focuses not on individuals, but systems of patient care which might be the cause of variations.

quality management - a broad term which encompasses both quality assurance and quality improvement, describing a program of evaluating the quality of care using a variety of methodologies and techniques.

regionalization - the identification of available resources within a given geographic area, and coordination of services to meet the needs of a specific group of patients.

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rehabilitation - services that seek to return a trauma patient to the fullest physical, psychological, social, vocational, and educational level of functioning of which he or she is capable, consistent with physiological or anatomical impairments and environmental limitations.

response time - the time lapse between when an emergency response unit is dispatched and arrives at the scene of the emergency.

risk factor - a characteristic that has been statistically demonstrated to be associated with (although not necessarily the direct cause of) a particular injury. Risk factors can be used for targeting preventative efforts at groups who may be particularly in danger of injury.

rural - those areas not designated as metropolitan statistical areas (MSAs).

service area (catchment area) - that geographic area defined by the local EMS agency in its trauma care system plan as the area served by a designated trauma center.

specialty care facility - an acute care facility that provides specialized services and specially trained personnel to care for a specific portion of the injured population, such as pediatric, burn injury, or spinal cord injury patients.

surveillance - the ongoing and systematic collection, analysis, and interpretation of health data in the process of describing and monitoring a health event.

trauma - a term derived from the Greek for "wound"; it refers to any bodily injury (see injury).

trauma care system - an organized approach to treating patients with acute injuries; it provides dedicated (available 24 hours a day) personnel, facilities, and equipment for effective and coordinated trauma care in an appropriate geographical region.

trauma center - a specialized hospital facility distinguished by the immediate availability of specialized surgeons, physician specialists, anesthesiologists, nurses, and resuscitation and life support equipment on a 24 hour basis to care for severely injured patients or those at risk for severe injury.

Trauma Nursing Core Course (TNCC) - a verification course providing core-level trauma knowledge and psychomotor skills associated with the delivery of professional nursing care to trauma patient. Developed and sponsored by the Emergency Nurses Association.

trauma registry - a collection of data on patients who receive hospital care for certain types of injuries. Such data are primarily designed to ensure quality trauma care and outcomes in individual institutions and trauma systems, but have the secondary purpose of providing useful data for the surveillance of injury morbidity and mortality.

trauma team - the multidisciplinary group of professionals who have been designated to collectively render care for trauma patients at a designated trauma center.

triage - the process of sorting injured patients on the basis of the actual or perceived degree of injury and assigning them to the most effective and efficient regional care resources, in order to insure optimal care and the best chance of survival.

triage criteria - measures or methods of assessing the severity of a person's injuries that are used for patient evaluation, especially in the pre-hospital setting, and that use anatomic and physiologic considerations-and mechanism of injury.

undertriage - directing fewer patients to trauma centers than is warranted because of incorrect identification of patients as having minor injuries when retrospective analysis indicates severe injuries.

9-1-1 - a three-digit telephone number to facilitate the reporting of an incident or situation requiring response by a public safety agency.

enhanced 9-1-1 - a telephone system that includes automatic number identification, automatic location identification, and (optimally) selective routing, to facilitate appropriate public safety response.